Modern packaging

For cover story see p. 103

June 1948

"What's your attitude?"

TOWARDS SOMETHING THAT'S REALLY NEW IN ADHESIVES?

The reason we ask is this: Many amazing product improvements have resulted from applying new "RESYN"* adhesives to packaging, converting and assembling operations previously thought to be at their highest level of efficiency.

"RESYN" adhesives provide higher resistance against all forms of moisture and temperature variations . . . adheres a wider variety of surfaces . . . offer a greater protection against vermin, mould, age . . . and add definite sales advantages to the finished product.

Successful "RESYN" adhesives are now used for: *Carton making* – with foil and varnished stocks in folding box machines. *Coffee bag making* – with special glassine, novelty bag and coated stocks. *Casket making* – for adhering cloth to metal, cloth to wood and cloth tufting. *Labeling* – on difficult varnished stocks. *Tube winding* – on ordinary and powder tubes. *Permanent identification of outdoor packages* – for all-purpose, all-weather labeling and overcoating on wood, fiber, painted steel, tin and glass. *Wood working* – to permit joint assembly operations to be handled and machined after 30 minutes clamping time. *Book making* – for high speed gluing-off, lining-up, case making, casing-in, tipping-in, padding, case sealing and labeling. *Paper drape making* – for seaming.

*Reg. Trade Mark

National ADHESIVES

Offices: 270 Madison Avenue, New York 16; 3641 Washtenaw Ave., Chicago 32; 735 Battery St., San Francisco 11; and other principal cities.
In Canada: Meredith, Simmons & Co., Ltd., Toronto and Montreal.
In England: National Adhesives, Ltd., Slough.

EVERY TYPE OF ADHESIVE FOR EVERY INDUSTRIAL USE

Me?

I'm open minded!
I would like to know more about "RESYN" adhesives

MR._____

COMPANY_____

STREET_____

CITY_____ ZONE____ STATE_____

JU

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DETROIT

GOODWILL in business is old-fashioned neighborliness between buyer and seller. It is understanding at work; giving placed on a par with getting. Business done against the background of friendship is the best business of all. Quality of a product may be imitated, service duplicated, but goodwill has no substitute. Phoenix Metal Cap Co., Chicago 8 and Brooklyn 18.

Modern packaging

Vol. 21 No. 10 June 1948

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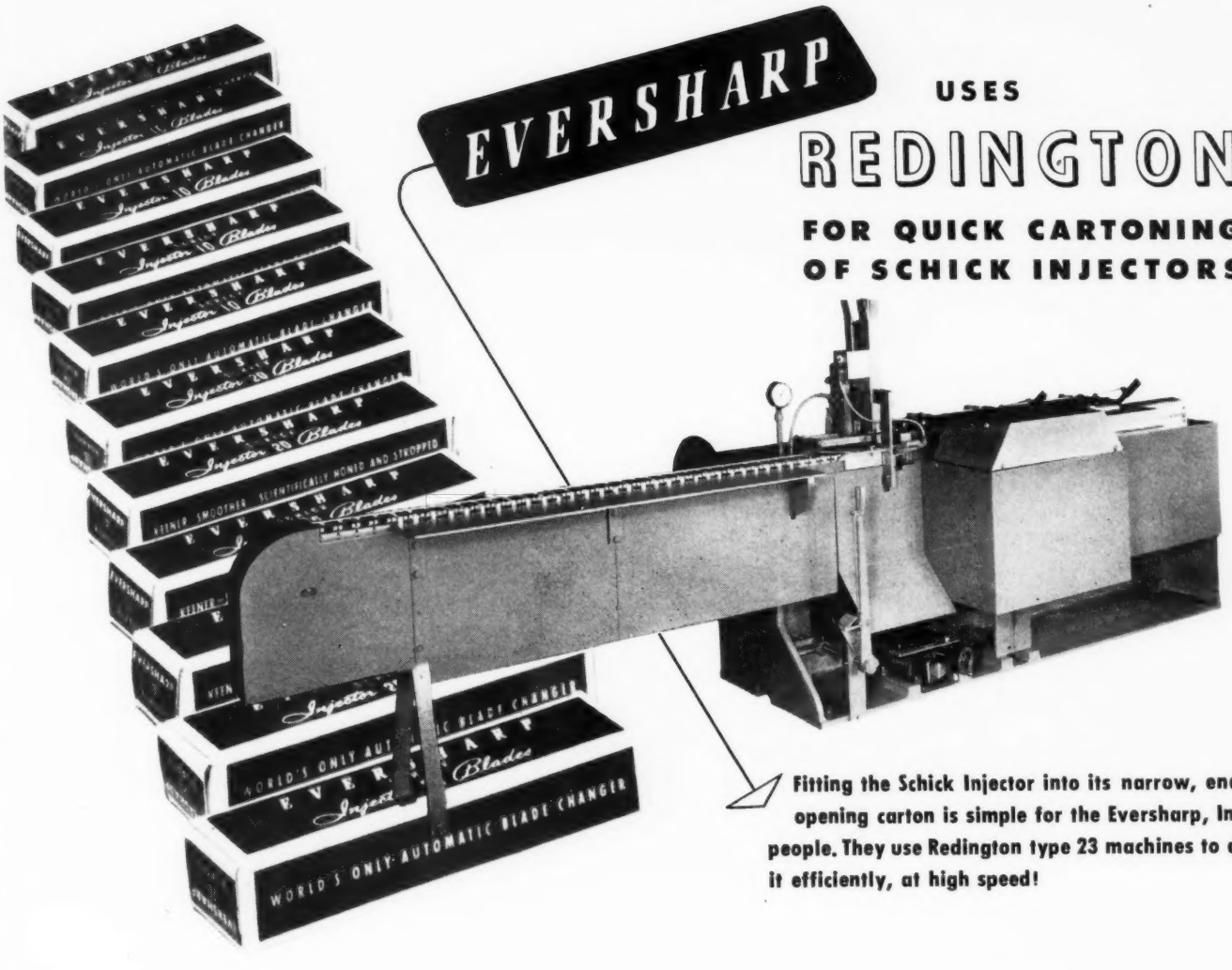
EVERSHARP USES REDINGTON FOR QUICK CARTONING OF SCHICK INJECTORS



Fitting the Schick Injector into its narrow, end-opening carton is simple for the Eversharp, Inc. people. They use Redington type 23 machines to do it efficiently, at high speed!

Redington has packaged Schick Injectors since 1940. The original machine proved so satisfactory, that since then 3 *more* Redington cartoning machines have been put into service to meet Eversharp's increased production!

As the Injectors move along in their individual pockets of the intake conveyor, magazine-fed cartons are expanded, and the Injectors inserted. Cartons are closed by tucking in the end flaps. An infallible skip-carton mechanism prevents the feeding of a carton when conveyor pocket is empty!

Other features that contribute to Redington's smooth performance include (1) continuous loading; (2) self-aligning roller bearings; (3) solid, cast iron base for all-important rigidity; (4) turned and ground shafting; (5) individually motor driven vacuum pumps; and (6) vari-speed drive. These are *standard* features of all Redington type 23 Cartoners!

You can speed up *your* production line with Redington! Let the skill and know-how of Redington engineers work on the problem of saving you vital time and labor costs. Write today!

F. B. REDINGTON CO. (Est. 1897) 110-112 S. SANGAMON ST. CHICAGO 7, ILL.

1897 REDINGTON 1948

51 Years of Packaging Leadership

AUTOMATIC CARTONING • WRAPPING • SPECIAL PACKAGING

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Published the 15th of each month by Modern Packaging Corp. Publication office: Twentieth and Northampton Sts., Easton, Pa. Subscription $5.00 per year in United States; Canadian, $5.50; foreign, $6.00. Two-year subscription: United States, $8.00; Canadian, $9.00; foreign, $10.00. All foreign subscriptions payable in United States currency or equivalent in foreign currency computed in current exchange by money order or by draft on a New York bank. Price this issue, 75¢ per copy.
Copyright 1948 by Modern Packaging Corp. All rights reserved including the right to reproduce this book or portion thereof in any form.
Printed in U. S. A. Acceptance under the Act of June 5, 1934, at Easton, Pa. Authorized October 7, 1936.

MODERN PACKAGING is regularly indexed in the *Industrial Arts Index*.

ASK THE RETAILER

TOO OFTEN A SURVEY of package acceptance is confined to the consumer, overlooking the fact that unless the retailer likes the package and finds it easy to handle and display effectively the ultimate consumer may never get a chance to pass judgment upon it. The case may be thrown out before it reaches the jury.

The frozen food packers recently discovered that the retailer not only is quite package conscious, but that he is capable of making some intelligent suggestions for improvement. The magazine *Quick Frozen Foods* cornered 17 retailers at the Frozen Foods Exposition and asked the general question: What can the packer do to help you sell more frozen foods? It is significant that of the 14 who responded, 11 had specific complaints or suggestions on packaging.

Two expressed the wish that all processors would make their packages uniform in size and with flat surface—no bulge—"so they won't slide all over the cabinet." Two criticized overwraps that tear or come unsealed, for "that makes the customers think the package has been opened and they won't buy it." Several emphasized that dull, one-color labels just can't compete against the trend to multicolor, pictorial labels; "people buy bright labels."

On labels, too, the dealers put in a plea for honest, conservative information as to number of servings and for unmistakable differentiation between items and between brands. One dealer put his finger on the sore point of the industry's recent merchandising troubles when he said: "If a customer is fooled by one brand, she distrusts all frozen foods."

Many of these are fundamentals of good packaging that older industries learned long ago, but the moral applies to all packagers: If you want to find out what makes a package sell, go to the retailer.

The Editors

Member, Audit Bureau of Circulations
Member, Associated Business Papers

JONES CARTONED!

In packaging Roux Oil Shampoo Tint at Roux Laboratories, Inc., a long hand-loading line was formerly used to insert two bottles, a cardboard separator, and a booklet into an unusually distinctive carton.

These operations are now being performed automatically by a Jones Constant Motion Cartoner—with startling reduction in unit loading costs. Not only has the long hand-loading line been reduced to a single operator, but the Jones Cartoner automatically prints expiration date and shade number on the end flap, and prints price on the side panel—operations which formerly required additional personnel.

Your cartoning operation may be simpler—your hand-loading line may be shorter—than that required for Roux Oil Shampoo Tint. But simple or complex, you can increase your production—reduce your costs—with a Jones Constant Motion Cartoner. Write today for complete information.

Remember, ONLY THE Finest CARTONER CAN GIVE YOU THE Lowest CARTONING COST!

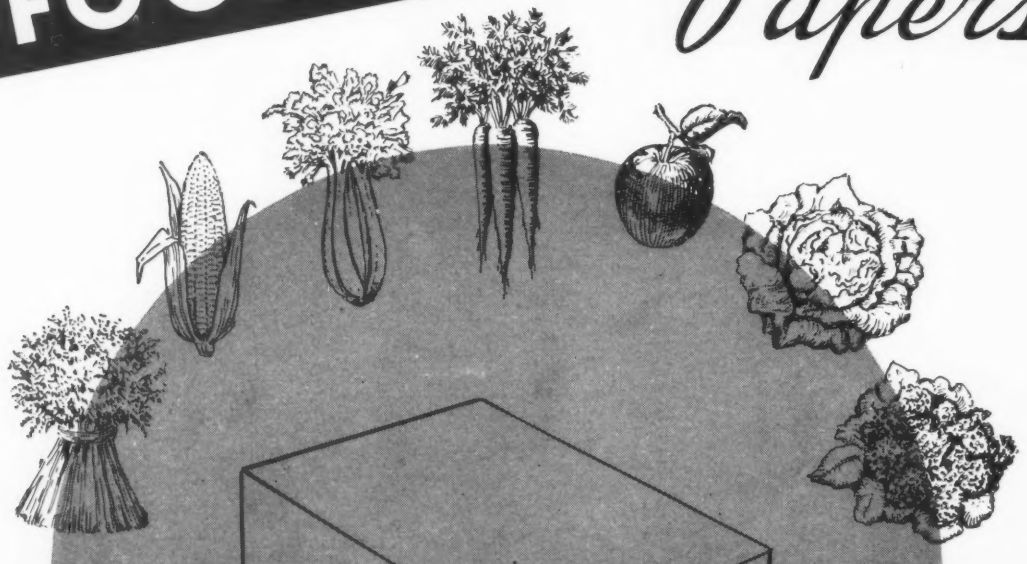
R. A. JONES & COMPANY, INC.

P. O. Box 485 CINCINNATI, OHIO

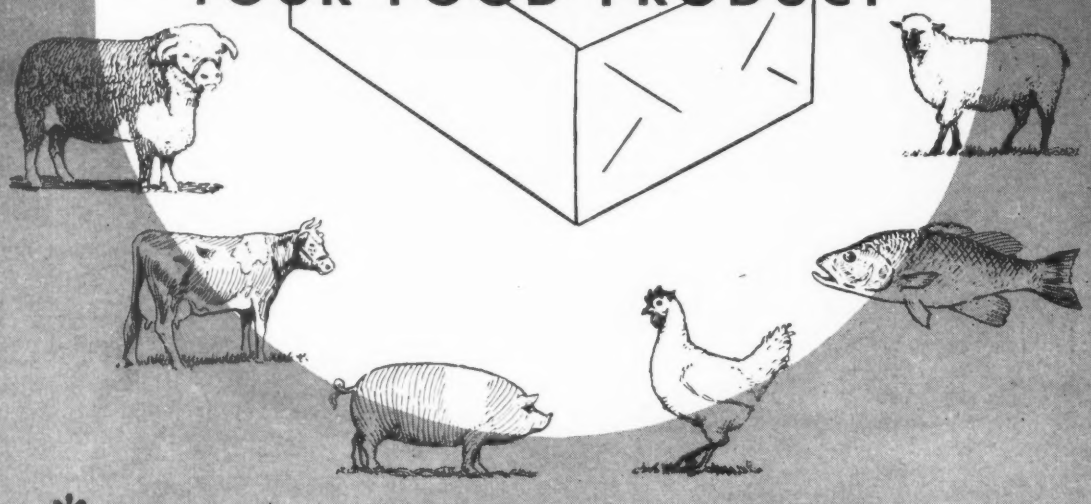
THE MAJORITY OF AMERICA'S CARTONED PRODUCTS ARE JONES CARTONED

KVP

FOOD PROTECTION *Papers*



YOUR FOOD PRODUCT



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For nearly every food there is a KVP paper engineered to deliver it to the user in Beauty and Safety.

PARCHMENT · WAXED · GREASEPROOF · LAMINATED

PLAIN AND PRINTED ROLLS · SHEETS · DIE CUT

Kalamazoo Vegetable Parchment Company

PARCHMENT · MICHIGAN

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KVP

HYCAR AMERICAN RUBBER LATEX...
imparts valuable properties to pulp and paper

HYCAR latex added directly to the pulp in the beater or head box, or used as an impregnant for paper, imparts valuable properties not otherwise readily obtained.

Tear and wet strength are considerably increased. Resistance to oils, solvents and chemicals is obtained, with retention of good aging properties. The addition of Hycar also insures excellent flex life and scuff resistance, and in thick papers prevents separation of the laminations.

Thus, better physical properties may be obtained in high grade pulp. In other cases the use of lower grade stock may be permitted because of improved physical properties obtained by the use of Hycar latex. Paper is made adaptable to fields where it is not now used.

Present and potential applications for papers of this sort range from wallpaper to insoles, from gaskets to leather replacement material, from shelf liners to packaging papers.

HYCAR latex is very easy to use. In most applications no vulcanization is required. Normal drying times are used. And HYCAR latex is an inherently safe material to handle. *No solvent system is needed.*

We would be glad to work with you on any problems relating to the use of HYCAR latex. For more information, please write Department HI-3, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio.

Hycar
Reg. U.S. Pat. Off.
American Rubber

B. F. Goodrich Chemical Company
A DIVISION OF THE B. F. GOODRICH COMPANY

WHEN EYE-APPEAL COUNTS!...

COUNT ON PACKAGES BY MILPRINT

LEADING FOOD PACKERS know the vital importance of package eye-appeal to food sales. Competitive products are on display side by side . . . and the choice is purely up to the consumer. That's why many famous food packers choose Milprint to provide the extra eye-appeal necessary to get immediate attention and whet the appetite. They know, too, the vast creative and technical service available to them . . . and the sales-success that follows so many Packages by Milprint. Why not call in Milprint yourself for a packaging consultation?

PACKAGES BY MILPRINT

Packaging Headquarters to the Frozen Food Industry

MILPRINT Inc. SALES OFFICES IN ALL PRINCIPAL CITIES

PACKAGING CONVERTERS • PRINTERS • LITHOGRAPHERS

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SAN FRANCISCO, TUCSON, VANCOUVER, WASHINGTON, STOUGHTON, WIS.

general offices: MILWAUKEE, WISCONSIN MILLS AT DE PERE, WISCONSIN

"ARTISTRY IN PICKLES... that's what it is"

*MAYBE Emily Post wouldn't like the idea, but any hostess who doesn't serve this product right out of the jar is missing a good bet in appetite appeal. Just look at that combination. A layer of sweet gherkins, a layer of sweet cauliflower, with onions and pimiento nestling at the top . . . sure makes a product that's hard to resist.**

OF COURSE that snappy looking Crown Screw Cap isn't any second-rate attraction either. Decorated in four colors to harmonize with the label design, it lends a distinct note of quality that goes hand in hand with this product. And, of course, as in all Crown Screw Caps, the Deep Hook Thread gives extra sealing pressure with any given application force . . . an assurance of dependable protection. Crown Cork & Seal Company, Baltimore 3, Maryland. *World's Largest Makers of Metal Closures.*

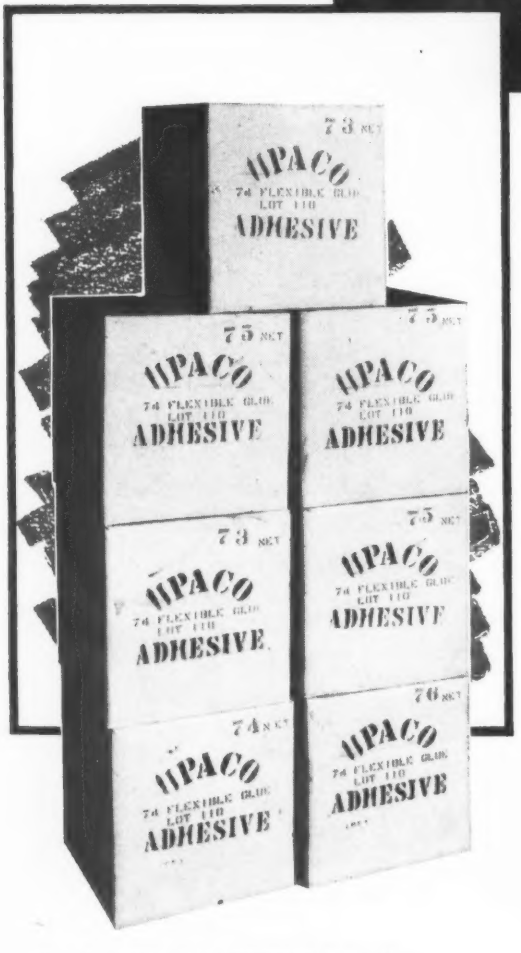
**Packed by Vita Food Products, Inc., of Maryland, Chestertown, Md.*

CROWN CLOSURES

Approved by millions of housewives

To all Set-Up Box Manufacturers

Which would you prefer?



Meerschaum Pipe, courtesy EHRLICH'S, Boston, Mass.

. . . A $500 MEERSCHAUM OR SEVEN CARTONS OF UPACO'S FLEXIBLE GLUE

Those who know **definitely** prefer UPACO's Flexible Glue. They know that a $100 investment in our #74 flexible glue will, for instance, convert set-up boxes worth several thousand dollars (perhaps containing several **hundred** thousand dollars' worth of merchandise — such as nylon stockings) and, in addition to excellent mileage, will give maximum quality.

UPACO makes a wide variety of flexible and non-warp glues for the box trades, with slow-drying types for bench work and very fast-drying products for fully-automatic machine production. Also available are specialties for non-tarnish work, as well as other specialty types for converting various varnished and coated stocks in box-wrap operations.

Currently in limited supply, these fine flexible glues are only produced under the same exacting standards as originally formulated.

THE UNION PASTE COMPANY

1605 HYDE PARK AVENUE · HYDE PARK, MASS.

win customers with cartons they like!

When it comes to packages, consumers know what they like—and dislike. They frequently buy a brand because it has a better carton—more convenient, more protective, more easily opened, handled and stored than that of a competitor. That's why it's so important to be sure that *your* carton pleases customers. Let our engineer show you, free of charge, how United cartons can help you increase sales by winning consumer acclaim. Write us today.

UNITED BOARD & CARTON *Corporation*

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Carton Plants:
Victory Mills, N. Y.; Syracuse, N. Y.; Brooklyn, N. Y.; Cohoes, N. Y.; Springfield, O.

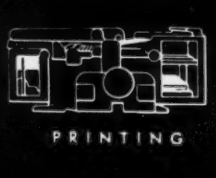
FROM PULP TO PACKAGE

PULP

PAPERBOARD

PLANNING

LAMINATING


PRINTING

PACKAGE

No "Shopping Wear" on this Cork Grip

ANOTHER USE FOR CEL-O-SEAL

REG. U. S. PAT. OFF.

You may not be able to see the "Cel-O-Seal" on this Shakespeare fishing-rod handle—but it's *there*... a transparent band that protects the cork grip against handling in the store. It keeps the cork clean and fresh . . . yet does not interfere with display.

Perhaps "Cel-O-Seal" bands can do a protective and merchandising job for you. They're available in a wide range of sizes and colors . . . can be indelibly printed with any message you wish. Easily applied by hand, they shrink to a tight, strong fit. We'll be glad to discuss with you any application you have in mind.

"Cel-O-Seal" cellulose bands are manufactured by E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Del. Also sold by Armstrong Cork Co., Lancaster, Pa., and I. F. Schnier Co., San Francisco, Cal.

DU PONT "CEL-O-SEAL" BANDS

DU PONT

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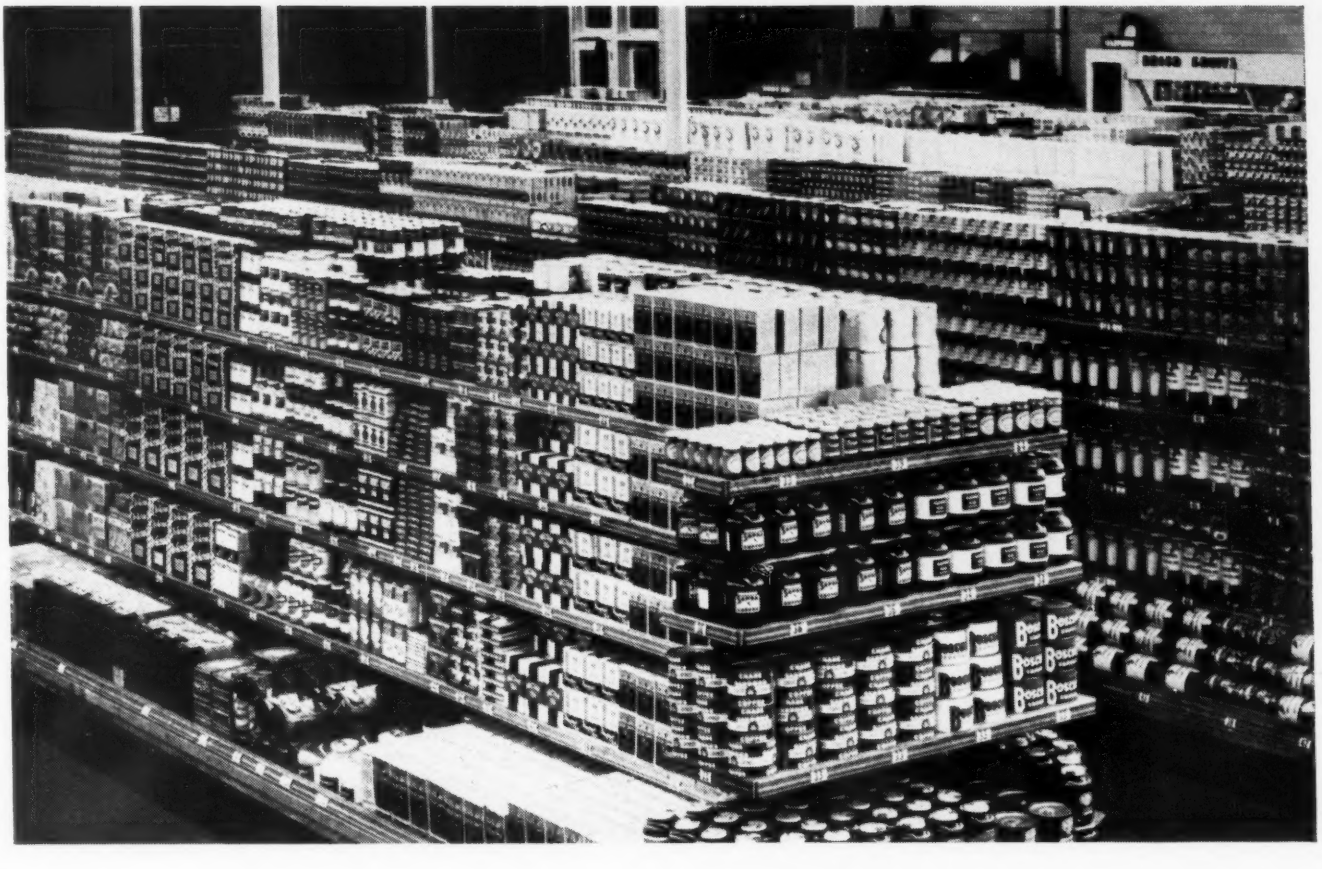
BETTER THINGS FOR BETTER LIVING
. . . *THROUGH CHEMISTRY*



Super-Marketing:

Impelling Labels for Impulse Selling

Reynolds *brilliant* aluminum can labels attract more customer attention in supermarkets where impulse buying accounts for an extraordinarily large percentage of sales. These labels have that rich look which means *self-selling*. Let us show you how to make your can *self-selling*. Send us samples of your present labels and we'll demonstrate how to put that *self-selling* magic into them.

REYNOLDS METALS CO., RICHMOND 19, VA.

Reynolds Aluminum

PRIORITY DELIVERY!

Oscar Legg's Paper Wool Maker

Sharpens itself while running • Turns waste paper into resilient paper wool packing • Ideal for disposal of secret and confidential documents • Will not clog or jam • Easily operated by unskilled labour • Output up to one ton per day • Clean new paper produces excellent food packing.

Both British made throughout

Oscar Legg's HIGH SPEED VACUUM MACHINE

Speeds up Container closing!

Seals Tins, Jars and Bottles by mechanical closure whilst under vacuum.

Output per minute:—
300 one pound jam jars
1,000 one ounce tobacco tins.

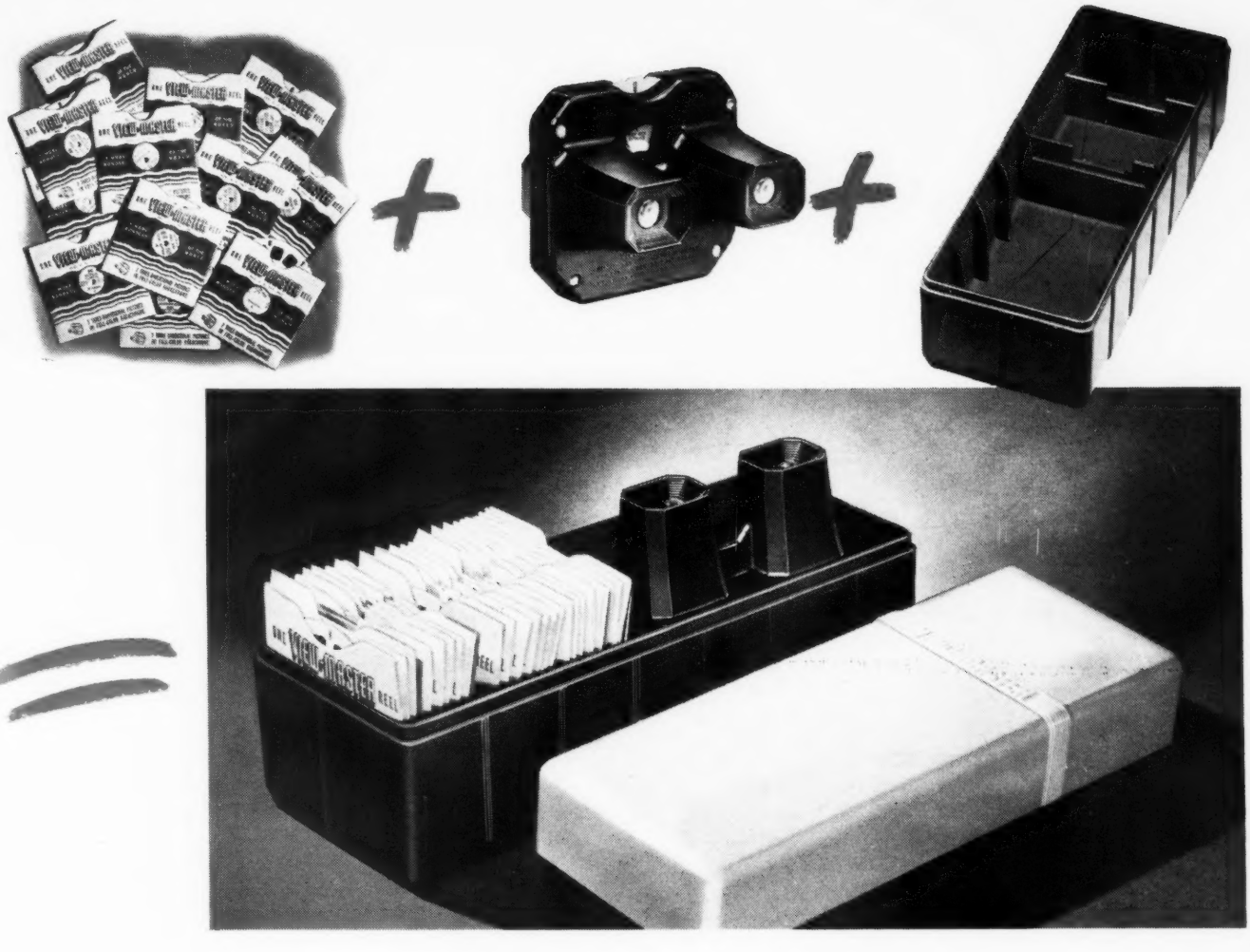
Easy to operate • Entirely automatic • All controls and gauges on front panel • Vacuum or Inert Gas • Also operates with soldering iron for tins which require soldering.

CABLES "OSLEGOS LONDON"

Tingey & Co.

CODES A.B.C. 5th Edition and Bentleys

17-22 GOSWELL TERRACE · GOSWELL ROAD · LONDON E.C.1 · ENGLAND



This "View Master" Film Viewer's Box holds much more than meets the eye!

Glorious three-dimensional color pictures are what this Sawyer "View Master" film viewer shows you. But its BAKELITE Styrene Plastic box also shows you things well worth looking into!

You'll first see *usefulness.* It carries not just the viewer but a whole library of films, securely held by strong cross-braces formed as the box is molded. You'll see *economy,* because BAKELITE Styrene Plastics are inexpensive and particularly suited to high speed, low cost injection molding.

You'll see *good looks* because of its beautifully colored, glossy finish and its crisp, clean lines. And you'll see *durability* because of high mechanical strength and moisture resistance. And its top will always fit tightly due to the material's dimensional stability.

If you'll look a little farther you'll see that here, too, is the ideal material for packages and closures. Transparent or in a wide range of colors, BAKELITE Styrene Plastics are first choice for packages that *display, call attention* to, and *sell* merchandise.

Perhaps the most important feature is the Bakelite engineering service which, in cooperation with you and your molder, provides the proper material plus sound counsel on packaging with plastics. We invite you to use this service. Write Department 89.

Data courtesy Beaman Plastic Products Co.

TRADE-MARKS

BAKELITE

Styrene

PLASTICS

BAKELITE CORPORATION, *Unit of Union Carbide and Carbon Corporation* UCC 30 East 42nd Street, New York 17, N.Y.

LEAD AND TIN TUBES

Most widely used, versatile. Can be wax-coated or tin laminated. Sun Tube makes a variety of shapes and sizes.

Phillips'
REG. U.S. PAT. OFF.
MILK OF MAGNESIA
Tooth Paste
CONTAINS THE EQUIVALENT OF 75% GENUINE PHILLIPS' MILK OF MAGNESIA TOGETHER WITH CALCIUM AND MAGNESIUM CARBONATES.
THE CHAS. H. PHILLIPS CO. DIVISION

ALUMINUM TUBES

Now better looking than ever with Sun Tube's exclusive new "satin finish" shoulders—no ridges or die marks. Many shapes and sizes.

UNITAINERS

For a single dose or application, powder or liquid. New break-off pin closure for liquids.

WHICH *of these tubes* IS BEST FOR YOUR PRODUCT?

Some products do best in lead and tin; others in aluminum.

Some do fine in direct contact with metal; others need a protective coating inside.

Sun Tube will gladly give you the information you need to choose the tube that's best for *your* product. No obligation. It's part of regular Sun Tube service to manufacturers—a complete service from designing to capping.

No matter what type tube you choose, Sun Tube will make it *right*. Dependably uniform. Beautifully designed. That's what Sun Tube has been doing for over 20 years!

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DOPLEX BRILLIANT

IN

Atomic Red!

This Unique Ultra-Brilliant Lamination of Transparent Plastic Film Also Available in Aztec Blue, Patent Black, Feminine Pink, Congo Brown, Rawhide, Duchess Blue, Spectrum White, and Spring Green.

It's tough . . . durable . . . soilproof . . . permanent. Resists moisture, grit, dust, grease! Fine line printing . . . solids and half-tones . . . show clear and crisp on its radiant, smooth surface!

Provides exceptional color attraction for greatest display value!

. . . For Setup Boxes
Lasting brilliance. Gives feeling of luxurious quality. Won't tear or crack.

. . . For Folding Boxes
Laminated to boxboard, it strengthens the board. Offers a high gloss, radiant surface.

. . . For Labels
Resists moisture and dirt. Gives brighter appearance. Won't scuff and wear like coated papers.

. . . For Book Binding
Can be bound on cases, embossed, or gold stamped.

Suitable for cook books, school books, sales aids and presentations.

. . . For Packages and Wraps
DOPLEX BRILLIANT bags or wraps, reflect the quality of holiday and gift merchandise.

. . . For Displays, Menus and Charts
Catches eye and attention. Wears longer, easy cleaning, retains brilliance.

. . . For Advertising Literature and Printed Pieces
Makes exceptional greeting cards. High attention value and quality appearance in printed literature.

MAKE THIS TEST!

Tear it. Crease it. Soil it. Then wipe it clean with a dry or moist cloth. See for yourself how DOPLEX BRILLIANT can take it! Compare it with any other label and box paper for toughness, color brilliance, printability and manufacturing handling. We'll gladly send you a larger sample to try in your own operation.

GET DOPLEX BRILLIANT NOW

ACHMAN-NOVASEL

PAPER CORPORATION

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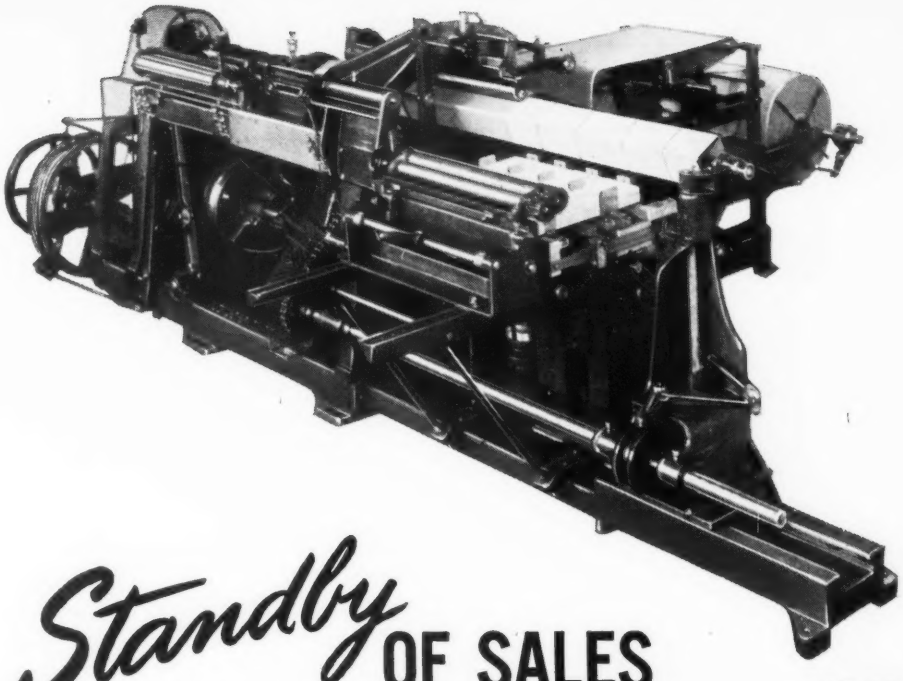


Standby OF SALES AND COST MINDED PACKAGE EXPERTS

KNOWLTON AUTOMATIC CONVOLUTE PAPER CAN WINDER

Designer, production man, salesman—whichever expert weighs the sales value or cost of making your containers —will vote unanimously for a Knowlton Automatic Convolute Paper Can Winder to do the job. It winds a variety of round or irregular shaped can bodies of 3 to 6 plies—1¾" to 8" in diameter or across diagonals. It turns out and labels 5 bodies at a time. Production speed *(according to size)* up to 150 can bodies per minute—and only one operator. The Knowlton Automatic Convolute Winder has mechanical advantages that will appeal to any cost-troubled production man—and produces a finished eye-catching container that keeps products profitably moving off store shelves and counters.

BOSTON
637 Massachusetts Ave.
(ARLINGTON)

M. D. Knowlton COMPANY

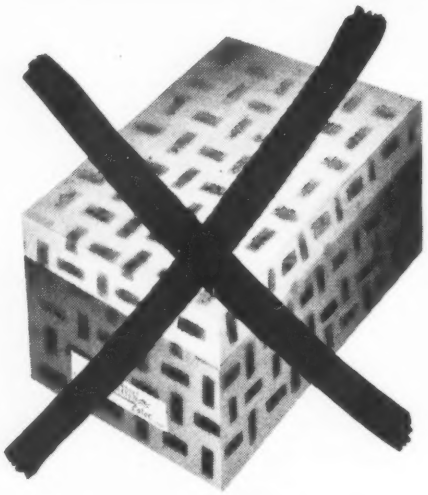
BROOKLYN
45-53 Beaver St.

CHICAGO
9 S. Clinton St.

TORONTO, CAN.
260 Richmond St., W.

Pacific Coast Representatives
H. W. BRINTNALL CO.
Los Angeles, San Francisco, Seattle

ROCHESTER, NEW YORK



NOT THIS

Don't be content with a continuous over-all trade mark design wrap for your package — plus the extra expense of a pasted end label

BUT *THIS!*

Dress up your package with a Decotone Printed Wrap with your trade mark or design spotted where you want it and with end label an integral part of the design

● DECOTONE Printed Wraps are complete layout wraps ready for your wrapping machine or in rolls marked for electric-eye cut-off. Produced by gravure in 1 to 4 colors, they offer almost limitless effects and are particularly adapted to large runs of one design and size where the most gratifying economies are obtained.

Our design department is at your command to develop a Decotone Printed Wrap that will enhance your package. Write today!

DECOTONE PRODUCTS

DIVISION

Fitchburg Paper Company

PACKAGING PAPERS *Converted Papers* SPECIALTY PAPERS

FITCHBURG, MASS.

HOW FRESH CAN A BE?

A daisy *can* be mighty fresh. But it can't hold a stem to ruffling put up in the Kellogg View Pac Container you see here.

Handling is a woman's privilege when she's buying. But oftentimes the product suffers. So this manufacturer asked Kellogg to develop a package that would fully display the merchandise, protect it, and *still permit some handling*. Working with a box-maker, Kellogg designed a special cover of sparkling acetate that nestles into the set-up box and dispenses trimmings through an extruded slot in its top. As a final step, Kellogg even helped originate methods for assembling these boxes on the production line, at a speed equal to the rate of manufacture.

Helping business grow by helping it do a better job with packaging is a Kellogg specialty. Kellogg has created hundreds of packages of all kinds to meet hundreds of unusual needs, all with one idea in mind: to make products more salable. Your problem will receive prompt attention. P-7

KELLOGG CONTAINER DIVISION

UNITED STATES ENVELOPE COMPANY • SPRINGFIELD 2, MASS.

CONTAINER MANUFACTURER • PRINTING • CONVERTING • • Cellophane • Pliofilm • Glassine Foils • Vinyls • Polyethylene • Rigid and Flexible Acetate • Coated and Specialty Papers

LET MR. CELLOPHANE GUIDE YOU TO BETTER PACKAGING

THE QUALITIES you need for successful packaging are engineered into Sylvania Cellophane. Every step in its manufacture is carefully checked to assure you of maximum dust, grease and moistureproofness. This careful control assures Sylvania Cellophane's uniform transparency and strength . . . low temperature durability . . . heat sealing qualities . . . excellent printing surface.

Here's double protection for cereals. Individual bags plus overwrapped window carton keeps product extra crisp . . . gives new sales appeal to a proven package.

SYLVANIA CELLOPHANE

SYLVANIA DIVISION AMERICAN VISCOSE CORPORATION

Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 350 Fifth Avenue, New York 1, N.Y. *Plant:* Fredericksburg, Va.

"LAMINATED Paraply Packages keep our baked goods Fresh!"

"It's Marathon lamination that does it! Look how the inside greaseproof paper is bonded to the strong paperboard. Between them lies the extra, third layer of protection in Paraply Bakery Pa ages—the laminating agent that bi paper to paperboard and provides a m tureproof barrier in itself!"

Alert bakers know the sure-fire sales value of the *triple* protection built into Marathon's Paraply Packages. *Three* separate barriers to loss of moisture and shortening content assure maximum protection for the oven-freshness of your baked goods. Paraply ages are made with two types of lamination for ich shortening ent. Use the lls. Use the nuts,

ckage
iden-
Bak-
ns in-

d mer-
to your
er Seal
arathon

MEMO

This recent ad demonstrated to the baking industry the exceptional product protection provided by Paraply Bakery Packages - another of Marathon's top-quality packaging developments.

For further information on Marathon's complete packaging service for the baking industry, ask your Marathon salesman or write direct to Marathon Corporation, Menasha, Wisconsin.

MARATHON

PROTECTED BY MARATHON

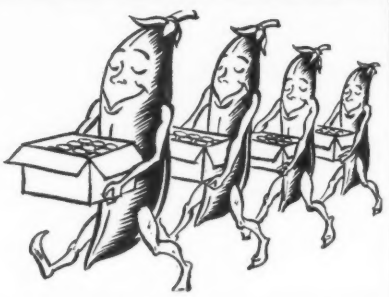
QUIZ FOR CANNERS

PEAS

1. What is America's favorite meal?

2. HOW MANY PEAS WOULD EACH AMERICAN GET IF LAST YEAR'S PACK WERE EQUALLY DIVIDED? (600?) (6,000?) (60,000?)

3. WAS IT EVER ETIQUETTE TO EAT PEAS WITH A KNIFE?



4. HOW MANY CASES OF CANNED PEAS ARE AVAILABLE FOR THE 1947-1948 SEASON?

PEAS stand for progress in the canning industry. Processing has been streamlined to the point where it takes less than two hours for peas to travel from the vine to the can. Garden fresh, with vitamins and full flavor retained, canned peas are available any season of the year. It's little wonder that today canned peas are such a favorite on American menus. We are proud of our long association with this industry and pledge ourselves to continue to offer "the best in service, the best in products."

ANSWERS

1 PEAS are on the menu of the "perfect meal" chosen by the average American in a recent poll. Besides peas other treats that come in cans were featured. Here's the complete menu:

FRUIT OR SHRIMP COCKTAIL
VEGETABLE SOUP OR CHICKEN BROTH
STEAK
MASHED OR FRENCH FRIED POTATOES
PEAS
VEGETABLE SALAD ROLLS AND BUTTER
APPLE PIE A LA MODE
COFFEE

2 If the last year's pack of peas were equally divided it is estimated that each American would get about 6,000 average size peas.

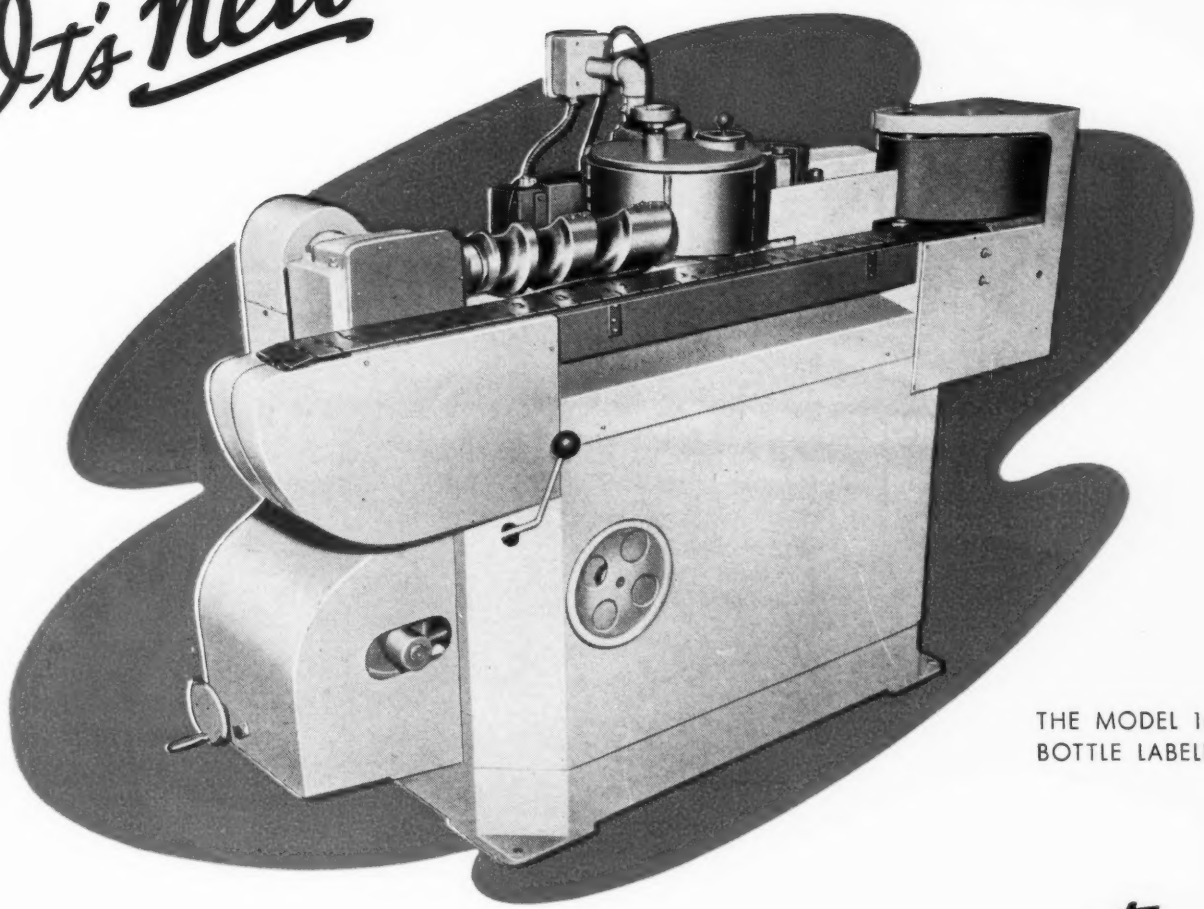
3 Yes, in 18th Century England the elite used special broad-ended knives to eat peas.

4 Supplies of canned peas available from packers and wholesalers for the 1947-48 season total 47,725,000 cases.

CONTINENTAL CAN COMPANY

100 East 42nd Street — New York 17, New York

It's new



THE MODEL 160
BOTTLE LABELER

Labels 300 bottles per minute — without glue!

NEW JERSEY MACHINE CORPORATION *Makers of the Pony Labelrite*

1510 WILLOW AVE., HOBOKEN, N. J. CHICAGO, CINCINNATI AND LOS ANGELES

492

Make more eyes

reach for your product...
in cartons of Coated Lithwite*

MANY FAMOUS PRODUCTS ARE GETTING AN EYE-CATCHING DISPLAY ADVANTAGE IN FOLDING CARTONS OF COATED LITHWITE . . . THE QUALITY CLAY-COATED BOARD, PLUS!

Right now, many a sales department really has *its sleeves rolled up.* Chances are, *yours* is one of them. You're looking for every way to get a break over competition.

Cartons of *Coated* Lithwite can *give* you one, an important *eye-catching* break—where it counts most—right on the dealer's shelf and counter.

For this revolutionary clay-coated board (the clay-coating is filmed on with mechanical uniformity in one straight-through operation) is unusually white and bright. Its surface is chalk-free, velvet-smooth. Colors come up brilliantly on cartons and packers of *Coated* Lithwite. Product pictures reproduce with a sharp, "reach-for-me" realism. Gardner-Richardson's Precision-Engineered craftsmanship means better filling machine performance, too . . . less waste . . . fewer jammers and leakers . . . less down time.

Worth investigating, isn't it? Write. We'll send a representative with complete facts.

Ask us to DESIGN more sales into your package

Want us to face-lift an old package design? Design a brand-new package with greater display value, shelf appeal, utility? Do you have something new that's never been packaged before? Gardner-Richardson's team of designers, artists and craftsmen will be glad to tackle your problem on a strictly "show-you" basis, without obligation. Write, today.

THE GARDNER-RICHARDSON CO.

Manufacturers of Folding Cartons and Boxboard, Middletown, Ohio

* Reg.U.S.Pat.Off. Sales Representatives in Boston, Chicago, Cleveland, Detroit, New York, Philadelphia, Pittsburgh, St. Louis

See How—

MARKING INFORMATION and INSTRUCTION
STREAMLINE PRODUCTION-SELLING-SERVICE

VARIABLE DESIGNATION

Marking by MARKEM

The Marlboro Shirt Company capitalizes on the many advantages gained in making *full use* of a simple system of identification and instruction built around Markem Equipment. Not content just to use Markem Equipment to speed up factory production, important as this is, they go right down the line to help the *Retailer* do a smarter complete selling job — also to make sure that *Mr. Wearer* gets the utmost satisfaction from his purchase.

Perforated ROLLS OF TAGS used as bundle tags show size and sleeve length, cut number, bundle number and quantity of shirt material being processed — consecutively numbered perforated tickets serve as piecework payroll control in laundry. STRINGED ADVERTISING SALES PROMOTIONAL TAGS — content of fabric required by the Wool Content Act of 1939, lot number and size are featured in palm-size promotional folder tied to shirt. ON THE FABRIC: (1) shade marked after cutting; (2) (on neck band) brand name, neck size, sleeve length and an important consumer service INSTRUCTION, *"Do Not Starch, Iron When Damp"*; (3) (on shirttail) size, lot number, and important *"Will Not Shrink"* INFORMATION. To add beauty to the package, an informative LABEL that harmonizes with the box.

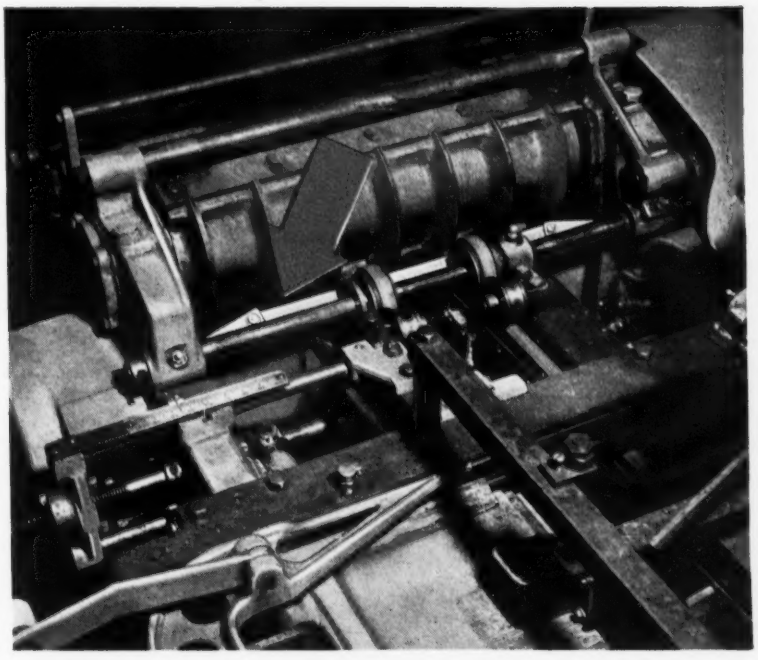
Do you know ALL the advantages of Marking by Markem?

LET MARKEM solve *your* problem. MARKEM service includes method, machine and inks to meet *your individual requirements* of speed, material and purpose, whether in marking boxes, bottles, labels, or the product itself. Tell us your needs; we'll do the rest.

MARKEM
MACHINE
COMPANY
KEENE, N. H.

Makes it Easy

TO WORK WITH *high-Static* MATERIALS



ANOTHER PRODUCTION PROBLEM IS SOLVED. Packaging tomatoes in acetate film led to production difficulties for American Stores Company of Philadelphia. Following installation of Ionotrons on the two wrapping machines, the company reports that the static problems were completely solved.

IONOTRONS
end static problems on packaging machinery

If your production troubles in handling acetate, cellophane, glassine, paper, fabric or other material are due to static, the chances are that Ionotron Static Eliminators® will solve your problems. This entirely new and different eliminator reduces the probability of envelopes, bags and wrappers sticking to machinery or to each other. Jogging is more uniform and delivery is improved

HOW THE IONOTRON WORKS — The Ionotron has no moving parts. It requires no gas or electrical connections. There is no operating expense. It consists of a continuous source of alpha radiation, which ionizes the air and makes it a conductor of electricity. Static charges flow off harmlessly to ground through the ionized air. Only maintenance requirement is the occasional cleaning of the active surface with a soft cloth. The radioactive material in the Ionotron has a half-life of 1,600 years.

USERS REPORT EXCELLENT RESULTS — Already Ionotrons are ending static troubles on many printing presses and packaging machines.

Oneida Paper Products Company reports that Ionotrons give smoother machine operation and make it simpler to maintain high quality. Also, they have increased production.

Milprint, Inc., say that in making paper bags from high-static films, Ionotrons reduced static troubles to a minimum or eliminated them entirely. On gravure presses Ionotrons prevented static fires and hugging on the rollers. All static troubles on sheeters were eliminated by the Ionotrons.

If you're having production headaches due to static, send us full details of your problem, and our engineers will make specific recommendations. Or, mail the coupon for a descriptive bulletin.

IONOTRON *Static* **ELIMINATOR**

***Dept. N-4, U. S. Radium Corporation, 535 Pearl Street, New York 7, N. Y.**
Please send Bulletin O-6 on the Ionotron Static Eliminator to:

NAME_____

TITLE_____

COMPANY_____

ADDRESS_____

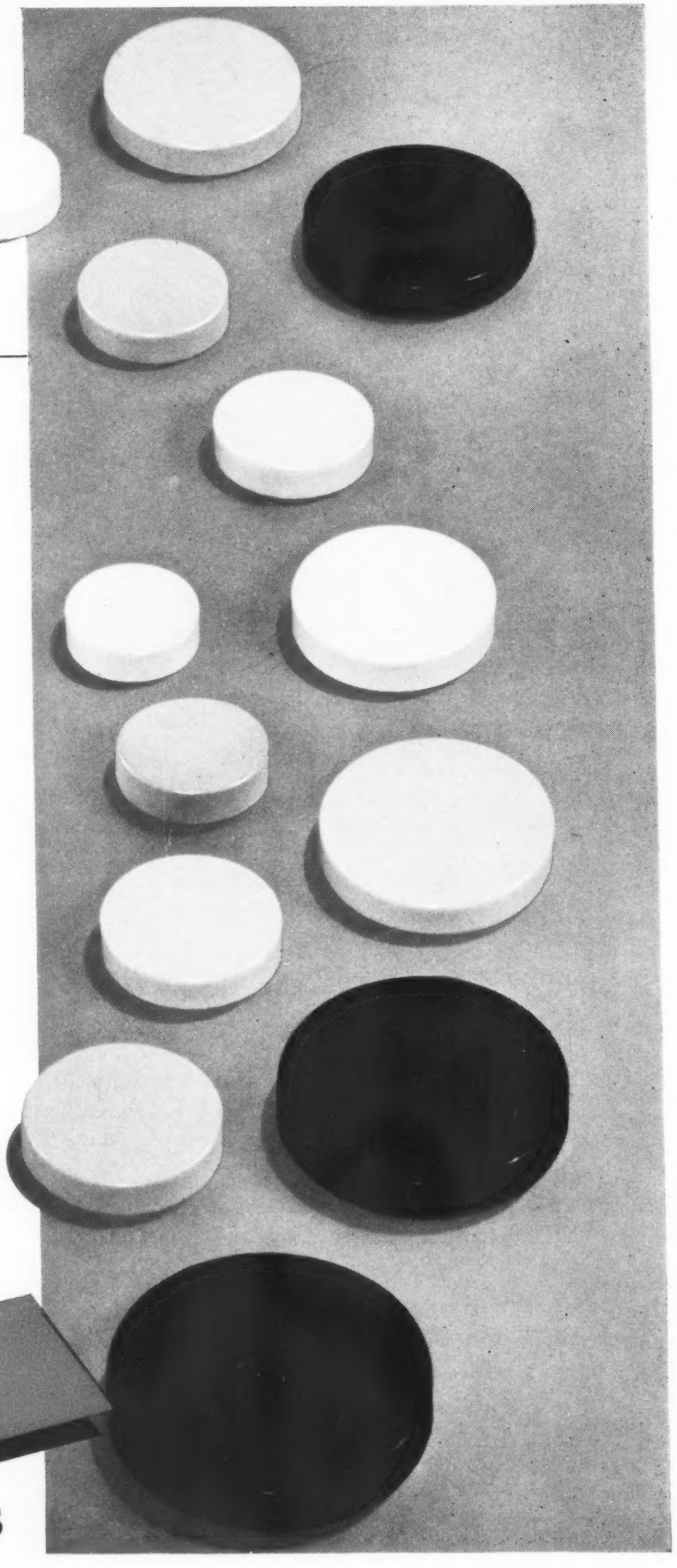
CITY_____ ZONE____ STATE_____

*Ionotrons are manufactured and distributed in Canada and the British Commonwealth by Eldorado Mining & Refining (1944) Ltd., Ottawa, Ontario, Canada.

Simplicity

Armstrong's Standard Jar Covers

The plain beauty of these colorful lids will give your package an air of quality and display good taste. You can add a cheerful touch of color to your package merely by topping it with an Armstrong's Standard Jar Cover. They are available in black, white, and pastel urea colors . . . whichever complements your package best. They will not chip or crack. They're non-corrosive. They have a high luster. And they are exceptionally economical to use. Made in all sizes ranging from 33 mm. to 100 mm. For further information and prices, address either I. F. Schnier Co., Inc., San Francisco 7 or Los Angeles 12, or Armstrong Cork Company, Glass and Closure Division, 5906 Prince Street, Lancaster, Pennsylvania.



ARMSTRONG'S

Artmold PLASTIC

CAPS

HARD TO STOP . . .

Skillful functional design, boxboard of superior quality, experience of personnel is our winning combination.

CHICAGO CARTON COMPANY

CARTONS WITH HIGHER "EYE-Q" RATINGS

CHICAGO CARTON COMPANY

4200 SOUTH CRAWFORD AVENUE • CHICAGO 32, ILLINOIS

One Call for All

A new and different service by River Raisin . . . as convenient as your telephone . . . a complete organization skilled in the creation and production of promotional and merchandising point of sale counter and window displays . . . from the basic idea to the finished display . . . *One Call for All.*

RIVER RAISIN PAPER COMPANY, DISPLAY DIVISION
Monroe, Michigan

RIVER RAISIN PAPER COMPANY • CORRUGATED AND SOLID FIBRE SHIPPING CONTAINERS PACKING MATERIALS • FIBRE BOARDS CORRUGATED STRAW • SILICATE OF SODA

River Raisin
DIMENSIONAL DISPLAYS

They put eye appeal and pleasant feel on Top

DUREZ *Phenolic Plastics* CLOSURES help these Raymond Laboratories bottles say to women everywhere, "I belong on your beauty shelf." Rich in color, clean and pleasant to touch, Durez not only complements the rest of the package with these surface appeals . . . it has many important ones that go deeper. Durez is non-bleeding. It has excellent moldability and conforms easily to unusual shapes. Its impact strength and resistance to moisture and to mild acids and alkalies are also important to the package designer. The wide use of Durez for nationally famous lines suggests that you consider it first for *your* packaging.

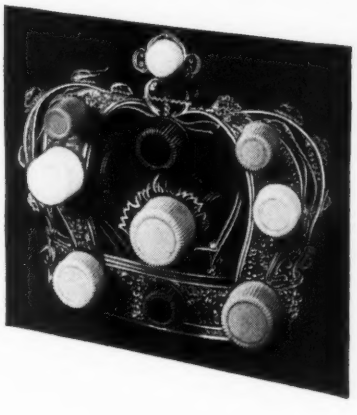
We'll gladly work with you and your molder. Durez Plastics & Chemicals, Inc., 296 Walck Road, North Tonawanda, N. Y.

DUREZ

PHENOLIC RESINS

- MOLDING COMPOUNDS
- INDUSTRIAL RESINS
- PROTECTIVE COATING RESINS

PHENOLIC PLASTICS THAT FIT THE JOB



Among Leading Closure Producers the use of Durez molding compounds is standard practice. Giving its Durez items a prominent place, the Owens-Illinois Glass Co. aptly captions this new display card — "Empress Closures Command Respect."

IN THESE days of growing competition, the dress of your product cannot be too good. It must get attention, create desire, and *sell* as never before.

A. C. M. Clay Coated Cartons stand out in the stiffest competition. Pure white, velvet smooth surfaces print better, have greater luster, more eye-appeal. Perfect color reproduction *sells* the shopper that contents are fresh, clean, desirable.

Investigate our complete packaging service for advantages of a new, better, more buy-compelling carton for your product. No obligation! Write, wire or phone the sales office nearest you.

● **AMERICAN COATING MILLS**
Division of Owens-Illinois Glass Company
PLANTS: *Elkhart, Ind. • Chicago • Memphis • Grand Rapids*

America's Largest Producers of Clay Coated Folding Boxboard and High Quality Printed Cartons

The Secret is in the SURFACE!

A.C.M. Clay Coated Cartons
and carton board

SALES OFFICES: *Chicago • New York • Elkhart • St. Paul • Memphis • Grand Rapids • Evansville • Detroit • Indianapolis • Cleveland • Pittsburgh*

Glassine bags by C. E. Stevens Bros., Baltimore, Md. Inks by Bensing Bros. & Deeney.

Preprint Inks

for

WAXED PACKAGING

Leading converters and packagers find BBD Preprint Inks unexcelled for printing on glassine paper stock before it is waxed. The explanation lies in the special ink formula developed by Bensing Bros. & Deeney, the nation's leading manufacturer of aniline printing inks.

Preprinting Inks are specifically compounded to provide sharp, clean vivid impressions on all types of glassine papers . . . *without bleeding.* They have the property—exceptionally important in the case of moisture-proof and grease-proof packaging—of taking a smooth, *unbroken* wax coating. Consequently, the packaged product is protected against dangerous moisture leakage at those points on the waxed glassine where printed matter appears.

You can get Preprint Inks in colors to match your sample exactly . . . in either pastel or brilliant tones.

Write now for samples, prices and detailed information.

Distributors

Manton Brothers
Elizabeth Street, Toronto, Canada

A. M. Bojanower
2795 E. Slauson St., Los Angeles 11, Cal.

Export Division

McLaurin-Jones Co.
150 Nassau Street
New York 7, N. Y.

Associated Manufacturing Plants

Bensing Brothers & Deeney, Inc. in Mass.
81 Albion Street, Wakefield, Mass.

Bensing Brothers & Deeney, Inc. in Ill.
2358 N. Seeley Avenue, Chicago 47, Ill.

BENSING BROTHERS & DEENEY

Home Office and Plant: 401 N. BROAD STREET, PHILADELPHIA 8, PA.

ipi
THE IPI PACKAGE POST
INKS FOR FOLDING CARTONS
BOX WRAPS - BAGS - LABELS
CORRUGATED & FIBREBOARD BOXES
FOIL - PLASTICS - METAL - GLASS

A Guide To Pr

THE EARLY BIRD CATCHES THE BEST COLORS

In package printing, the early bird doesn't catch a worm; he catches the best colors.

For the right time to select printing inks for packaging is *when the package is in the dummy stage.* When the ink maker is brought into the picture early, he can aid in the selection of colors which can be matched in inks with the requisite working qualities, deteriorant-resistance, and color fastness.

Many leading package, bag, and label printers, realizing this fact, and recognizing IPI's skill and experience in developing printing inks for packaging, consult us early in their preparations for printing a job. We invite inquiries from package printers with problems.

Address inquiries IPI, Dept. MP6, 350 Fifth Ave., New York 1, N. Y.

CHECK LIST OF INFORMATION FOR THE INK MANUFACTURER

To meet today's package printing problems, the ink formulator needs this information: Will the package be exposed to sunlight, subject to heat or moisture, handled often? Must it be proof to deteriorants such as perspiration, soaps, alkalies, acids, alcohols, oil, fats, butter, hot paraffin, and adhesives? What is the printing surface (furnish sample)? What is the printing process? To formulate inks for metal decorating, the ink manufacturer should also know baking temperatures and time, character of contents, whether or not the last color will be wet varnished.

WHICH PRINTING PROCESS IS BEST FOR YOUR PACKAGE?

All six processes of printing — letterpress, lithography, gravure, aniline, silk-screen, and photo-gelatine—are suitable for package printing. Each process has advantages peculiar to itself. By close and early cooperation with your printer, you can facilitate the selection of that process best suited to your package.

Printing Inks For Packaging

THESE FAST-SETTING INKS MEET DEMANDS FOR FASTER PRINTING

The packaging industry is demanding faster printing. IPI* has developed three different inks which set instantly, Vaporin*, Vaposet*, and Vapolith*. Vaporin letterpress inks, which set instantly on the application of heat, have been used in the printing of bags and labels with notable success. Vaposet inks, which set instantly on the application of steam or water vapor, have definite advantages in the printing of corrugated board and food packages. Vapolith offset inks for web-fed presses set instantly with the application of heat. Other Vapolith inks for sheet-fed offset presses set fast without the application of heat.

IPI HAS THE INKS FOR THOSE NEW, HARD-TO-PRINT SURFACES

IPI has developed inks for printing on plastic sheeting, metal foils, plastic coated papers such as Kromekote, plasticized cellophane, acetate, and glassine. Special inks have been formulated for molded and extruded plastic containers, and for glass. IPI's research program keeps abreast of the frequent changes in the field of plastics.

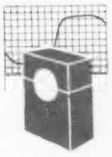
PRINT CORRUGATED BOARDS WET; ELIMINATE HOURS DRYING TIME

Printing on corrugated board is frequently slowed up by the need for drying the board before printing. With IPI Vaposet inks, which set instantly in the presence of moisture, the warm, wet boards can be printed immediately. At one plant, 45,000 corrugated containers were printed in two colors, taped, bundled, and packed in 4 hours. Previously the printer had to wait 12 hours before taping. Rubber rollers must be used with Vaposet inks.

SELECTING COLORS TO MEET SPECIFICATIONS

Selection of colors for package printing is limited by the specifications the ink must meet. If light-fastness is demanded, the selection is smaller than if it is not required. The more special requirements in the specifications, the smaller the choice of colors. The choice is being steadily widened by the technical skill and ingenuity of the ink chemist so that a wide variety of inks is now available to meet almost any reasonable set of specifications.

COLOR CONTROL DEPENDS ON ACCURATE MEASUREMENT



For setting up permanent color standards, spectrophotometric measurement is recommended as in the A. S. A. Specification and Description of Color, Z-44. When package colors have been subjected to this analysis, precise standards with press tolerances can be established. These standards are then used to keep colors uniform even when different printers produce the same package.

THERE HAVE BEEN ADVANCEMENTS IN BAG AND LABEL PRINTING INKS

IPI Vaporin inks are especially suited to high-speed printing on paper bags and labels. They are stable at room temperatures but *set in a split second* at elevated temperatures. These inks print sharp and bright, and bind firmly to the stock. They set and dry so fast that absorption of ink by the stock is reduced to a minimum, and slip sheeting is eliminated. For bag printing involving waxing, IPI Vaposet inks are recommended.

ODOR-FREE VAPOSET INKS ARE IDEAL FOR FOOD PACKAGING

Vaposet inks have two advantages which make them ideal for food packaging—1. They, of all printing inks, come closest to being odorless, and 2. They can be run through waxing machines within two hours after printing, and are the real answer to printing, waxing, and rewinding jobs. In addition, Vaposet inks are fast drying. They set instantly on the application of steam or vaporized water; set fast even without moisture. They are available in a full range of colors, print cleanly, have superior sealing qualities, and are easy to handle on sealing machines.

OPACITY, LIGHT-FASTNESS, SHARP PRINT FEATURES OF ANILOX INKS

You don't need to have difficulty with lack of opacity in your aniline printing. Not if you use 100% pigmented IPI Anilox* inks. They have the color strength you need to produce opaque results. Anilox inks also print sharp and have a high degree of light fastness on patent coated papers, acetate, and foil. You can get good results on the more highly plasticized grades of cellophane. All Anilox inks are alcohol soluble, and contain no solvents harmful to normal rubber rollers and plates.

*Reg. U. S. Pat. Off.

INTERNATIONAL PRINTING INK

DIVISION OF INTERCHEMICAL CORPORATION • 350 FIFTH AVENUE, NEW YORK 1, N. Y.

BRANCHES AND SERVICE STATIONS IN 29 PRINCIPAL CITIES

Is your problem WET *or* DRY?

Watson-Standard

has a Universal

WET PRINT VARNISH

that:

1. Works over all types of ink. EITHER WET OR DRY.
2. LEVELS out over any type or color ink.
3. GIVES BETTER DEPTH TO COLOR.
4. WILL NOT WRINKLE, GO FLAT OR BLEED.

Further information will be forwarded on request.

TOUGH JOB HEADQUARTERS
℞ Prescription Finishes

Give us your metal coating problem. We guarantee you an answer based on your conditions, and not just a standardized formula.

THE WATSON-STANDARD CO.

Manufacturers of
PAINTS • VARNISHES • INDUSTRIAL FINISHES AND LITHOGRAPH COATINGS

FACTORY AND GENERAL OFFICES: PITTSBURGH, PA.
WAREHOUSES: BOSTON, BUFFALO, DETROIT, NEW YORK

• Designed and Produced by

WALDORF PAPER PRODUCTS CO.

Saint Paul, Minnesota

FOLDING CARTONS • CORRUGATED AND SOLID FIBRE SHIPPING CONTAINERS
DISPLAY MATERIALS • BOX BOARDS • BOX BOARD SPECIALTIES

Size of Window Display, 30″ x 40″

• • • for example

—even an *original, well planned* display must be *well lithographed* to be 100% effective.

Our aim is directed at all three points.
We shoot at best results for you.

Let us show you why well-known advertisers have worked with us for many years . . . write or phone us, please.

INDUSTRIAL LITHOGRAPHIC CO., Inc.

WINDOW DISPLAYS · · · POSTERS · · · COUNTER STANDS

285 Madison Ave., New York 17, N. Y.
MUrray Hill 3-7990

Plant—Brooklyn 18, N. Y.
GEdney 6-0700

Want to do this for your product?

Wider acceptance for any product is a goal packaging executives shoot for.

We have the same goal at Canco.

Take the case of Canco's single-trip *fibre* milk container.

Originated by our packaging experts, this container has contributed to the tremendous increase in the sale of milk in food stores.

WHY?

- Because it is much lighter to carry home
- No deposits to bother with
- Easier to store in the refrigerator
- Completely sanitary
- And it is thrown away when empty
- There's *nothing to return!*

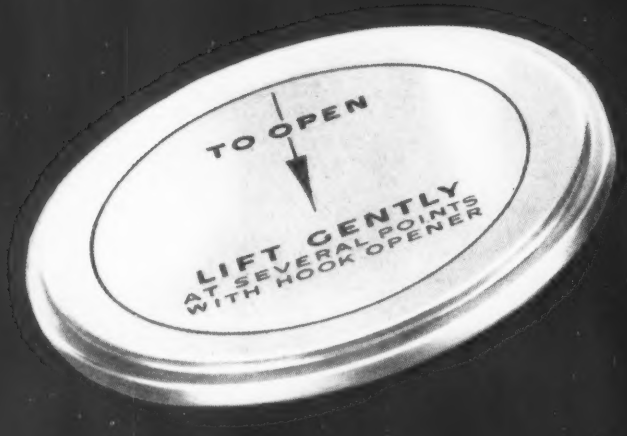
As a result of 47 years of experience in improving packages, Canco experts know most packaging answers.

Have you a question? CANCO

American Can Company

New York • Chicago • San Francisco

Peak of interest...



SELECTING a closure that delivers products in perfect condition is of "peak" interest to every packer. Anchorvac T Caps provide positive, permanently effective, tamper-proof seals for products packed in straight, flared or bead finish thin blown or thin pressed tumblers. They're equally suitable for hermetic or vacuum sealing, hot or cold packing or for sterilization after sealing. Since they're held in place mechanically rather than merely by vacuum, it is unnecessary to allow headspace when packing, for internal pressure won't loosen the seals or force them off.

MT. RUSHMORE—Here a mountain in the Black Hills of South Dakota was turned into a monument to four great men . . . becoming a unique Peak of Interest.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS
CORPORATION
LANCASTER, OHIO

IT'S *Anchorvac T Caps*

FOR THE PEAK OF INTEREST

It's *Glass* for sales appeal...

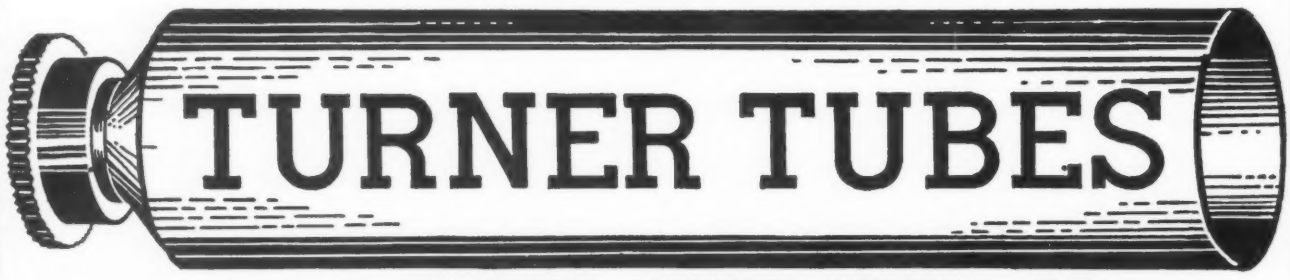
FOOD products sell faster when packed in glass. All the color, flavorful goodness and quality beckon to the buyer through the clear, sparkling glass walls. Glass has sales appeal because consumers can see that it protects . . . it's clean and sanitary. Glass containers have sales appeal because they are so convenient . . . easy, quick and safe to open and reseal . . . leftovers can be stored in original containers. Since survey after survey proves that women prefer glass-packed foods, why not take advantage of the Sales Appeal of glass.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS
CORPORATION
LANCASTER, OHIO

AND IT'S *Anchorglass*
FOR MAXIMUM SALES APPEAL

More than 50 years' experience in serving some of the largest tube users has proven this fact: When tubes stand up well under "use man handling" in customers hands . . . you know the quality is right . . . and quality tubes help build repeat business.



J. S. TURNER WHITE METAL CO.

210 RARITAN AVE., NEW BRUNSWICK, N. J.

MIDWESTERN SALES REPRESENTATIVES

Elliott Sales Service,
420 Curtis Building
2842 W. Grand Blvd.
Detroit 2, Michigan

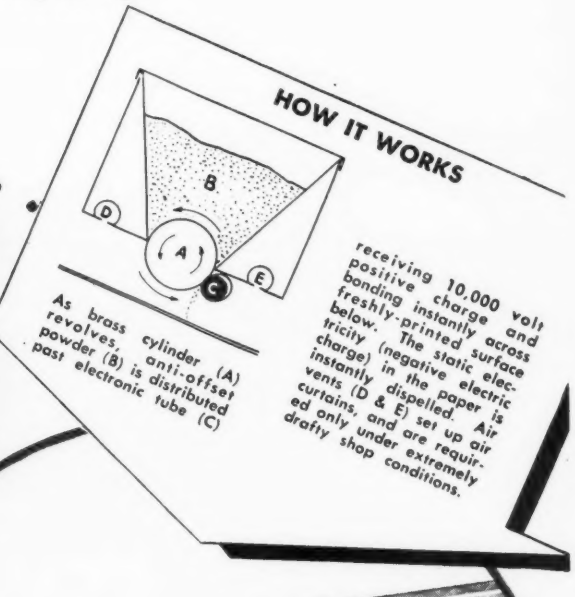
J. A. Bauer
521 Broadway
Cincinnati 2, Ohio

Keiffer & Son
7442 Williams Avenue
St. Louis 17, Mo.

GO! "NON-STOP" PRINTING.

OXY-DRY means...

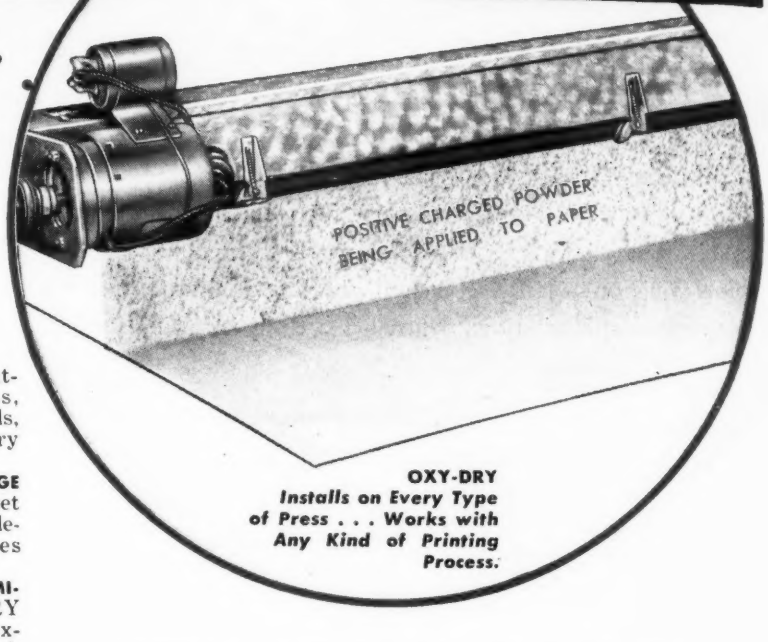
- **"Good-Bye" OFFSET WORRIES**
- **Press Operation to Full Delivery Capacity**


HOW IT WORKS
B
D
A
C
E
As brass cylinder (A) revolves, anti-offset powder (B) is distributed past electronic tube (C)
receiving 10,000 volt positive charge and bonding instantly across freshly-printed surface below. The static electricity (negative electric charge) in the paper is instantly dispelled. Air vents (D & E) set up air curtains, and are required only under extremely drafty shop conditions.

KEEP RUNNING

TO FULL CAPACITY OF PRESS DELIVERY WITHOUT FEAR OF OFFSET

Stopped presses make no money. OXY-DRY helps keep presses running—makes you more money because (a) Sheets can be stacked to full capacity of press delivery without trace of offset. (b) Quick drying of ink through ozone action speeds handling—helps keep delivery clear. (c) One powder-filling of unit usually lasts 24 hours running time. No press stoppage for frequent refills.



OXY-DRY
Installs on Every Type of Press . . . Works with Any Kind of Printing Process.

NO OTHER SPRAYER

CAN OFFER ALL THESE ADVANTAGES

1. **UNIFORM OFFSET PREVENTION** . . . Powder bonds instantly across printed surface, acting as uniform spacer between sheets.
2. **STATIC ELIMINATION** . . . assures easy flow of sheets. No sticking or jamming of paper.
3. **DRYING SPEEDED** . . . Non-toxic ozone created by electrical discharge from high-voltage tube speeds oxidation of ink—quickens drying.
4. **FASTER HANDLING** . . . Removal of all offset danger enables printer to stack sheets, handle full skid loads, at full press delivery capacity.
5. **SAVES LABOR, STORAGE** . . . OXY-DRY offset prevention speeds deliverv time, saves labor, stops waste.
6. **HEALTHFUL, ECONOMICAL** . . . OXY-DRY offset powder—a mixture of edible starch powders — is a fully-endorsed Health factor. No dust hazard. No exhaust system required. Small amt. of powder needed.

HUNDREDS OF PLANTS, Using Every Kind of Printing Press and Process, Are Now Successfully Equipped with OXY-DRY SPRAYERS.
We will gladly supply you names of printers in your region using OXY-DRY SPRAYERS with the type of printing press or process in which you are interested.

OXY-DRY

For further information write Dept. P

OXY-DRY SPRAYER CORPORATION

320 So. Marshfield Ave., Chicago 12, Ill.

. . . allows stacking of sheets to full press delivery capacity without trace of offset.

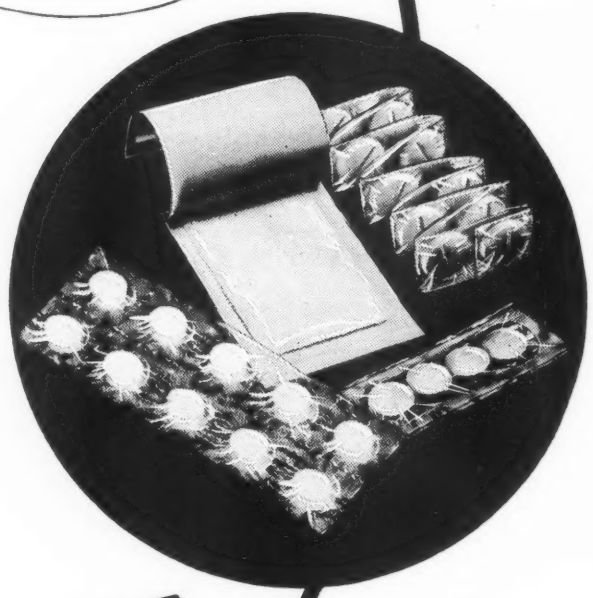
have you felt the drag

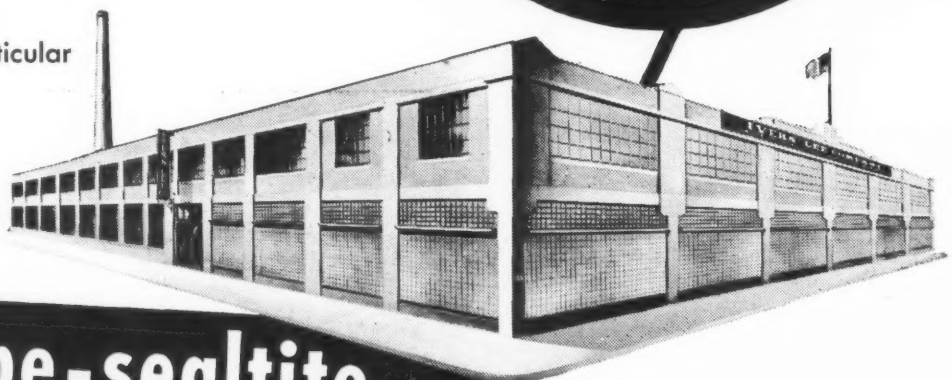
. . . we can give you a lift

Sagging sales curves and hesitant buying can be livened — new and improved products, attractively presented and wisely sampled are already proving an antidote to the buyer's market of '48. And Sanitape-Sealtite is the important "stepping-stone" — for no other method provides so complete, effective and practical sampling.

No other package is so attractive, convenient and hospital-clean — no other packaging service is so complete, efficient and dependable as our Contract Packaging Division — 100,000 square feet equipped with every modern facility and having a daily capacity of 10,000,000 units.

For a New Lift in A Tough Market — turn to Sanitape-Sealtite Sampling and the service of our Contract Packaging Division. Details pertinent to your particular problem on request.





sanitape-sealtite

Sanitape-Sealtite is a unique method for packaging pills, tablets, capsules, creams and powders, by which each unit or unit-dose is sealed in its own air-tight compartment — assuring complete protection and maintained efficacy. Packages, machines and methods fully covered by U. S. and Foreign Patents and Patents Pending.

IVERS-LEE COMPANY, 215 CENTRAL AVE., NEWARK, N. J.

New Ways to

PROTECT PARTS

In PRODUCTION, SHIPMENT AND STORAGE

CLEVELAND CONTAINER

PLUGS . . . SLEEVES and CAPS

PROTECT against damage to threads . . . PLUGS for internal threads; SLEEVES AND CAPS for external threads

PROTECT against dust and dirt . . . against damage in dipping or spraying

* * *

Made in sizes and shapes to meet every need and purpose.

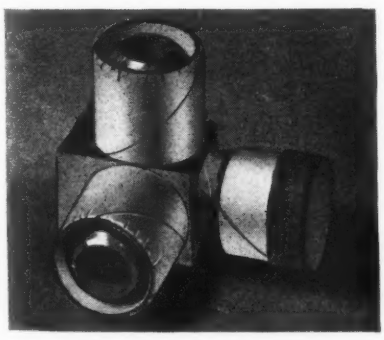
PLUGS and **SLEEVES** obtainable in diameters $\frac{1}{8}$" up.

CAPS obtainable in diameters from $\frac{1}{4}$" up.

SPECIAL SIZES or **SHAPES** made with no die charge where quantities warrant.

ATTRACTIVE PRICES

based on immense production capacity — quick deliveries.



FOR EXPERIENCED COUNSEL, CONSULT OUR ENGINEERING DEPARTMENT

The CLEVELAND CONTAINER Co.

6201 BARBERTON AVE. CLEVELAND 2, OHIO

- All-Fibre Cans • Combination Metal and Paper Cans
- Spirally Wound Tubes and Cores for all Purposes
- Plastic and Combination Paper and Plastic Items

★

PRODUCTION PLANTS also at Plymouth, Wisc., Ogdensburg, N.Y., Chicago, Ill., Detroit, Mich., Jamesburg, N.J.
PLASTICS DIVISION at Plymouth, Wisc. • ABRASIVE DIVISION at Cleveland, Ohio
SALES OFFICES: Room 5632, Grand Central Term. Bldg., New York 17, N.Y., also 647 Main St., Hartford, Conn.
CANADIAN PLANT: The Cleveland Container Canada, Ltd., Prescott, Ontario

Where can you use the new MARVINOL® RESINS?

Weigh these advantages of Marvinol, the new vinyl resin, against your packaging problems:

STABILITY! Marvinol-based plastics . . . whether film, coated materials or rigids . . . are tougher, more flexible, have better resistance to tear, wear, heat, cold, sunlight, oils, acids. They're waterproof, unaffected by mold or fungi, will not discolor on aging, may be tasteless and odorless, have great dimensional stability.

VERSATILITY! Packages made from this low-priced raw material are non-inflammable, may be heat-sealed, can be crystal clear, brilliantly or delicately colored. Marvinol formulations are light in weight, smoother to the touch, have high molecular weight yet are easy to process or work.

UNIFORMITY! Marvinol resins are a development of Martin research and Martin's quarter-century of plastics experience. They're being produced in the world's most modern chemical plant to assure you of unexcelled uniformity. The Glenn L. Martin Company does not compound or fabricate in the plastics field, but we will be glad to supply you with a list of companies now processing Marvinol resins. Write on your company letterhead to: Chemicals Division, The Glenn L. Martin Company, Baltimore 3, Maryland.

Martin ★ Marvinol

Resins, Plasticizers and Stabilizers Produced by the Chemicals Division of

THE GLENN L. MARTIN CO[illegible] NAL INSTITUTION

® "Better Produc[illegible]artin."

Your displays can be as fine as

Seagram's "GOLDEN SPIKE"

"Golden Spike" Window and Interior Display Sets Created and Manufactured by Palmer Associates.

if you call in

PALMER

FOR YOUR CREATIVE

Lithographic Advertising

GEORGE E. MOSLEY

At the recent Point of Purchase Advertising Institute's symposium, George Mosley, advertising manager of Seagram Distillers Corporation, stated in his address: "The Golden Spike campaign probably is as significant, as elaborate, as fully 'rounded-out' a promotion as Seagram's has ever launched on a single product."Mr. Mosley declared that by "rounded-out" he meant the complete utilization of the combined skills and creative talents of the advertising department, agency and lithographer.

Special Offer

To qualified advertising executives—agencies or manufacturers other than distillers—we offer a complete, informative package containing a reprint of Mr. Mosley's speech, The Gold Book, a portfolio in color outlining the entire campaign—consisting of displays, magazines, newspapers, etc.—and a complete full size lithographic sheet.

YOU CAN BUY 10,000 exceptionally fine Window Display sets for approximately $2.50 each. We do it all—the original ideas, finest art work, best 8-10 color lithography, top quality mounting. (Smaller quantities naturally at a higher unit rate.) No finer lithographic displays are made. We take the mystery out of lithography and make it easy to buy.

PALMER ASSOCIATES
Lithographic Advertising
51 East 42nd Street · New York 17, N. Y.

Palmer Associates
51 East 42nd Street
New York 17 N. Y.

M

We are interested in your kind of service and we would like to receive your Seagram "Golden Spike" package.

NAME ..... TITLE .....

COMPANY .....

STREET .....

CITY ..... ZONE ..... STATE .....

There's a pot of gold at the end of this rainbow!

Press lightly and out comes a fine liquid mist. The container won't clog — can't break. And useable to the last drop — special built-in dispenser squeezes out every last atom. Ideal for travel kits. Much in demand for milady's dressing table.

TUPPER PUTS THE SQUEEZE IN YOUR PACKAGES!

FOR

DEODORANTS

COSMETICS

PERFUMES · COLOGNES

BABY POWDER · OIL

AND NURSERY ITEMS

SHAVING LOTIONS

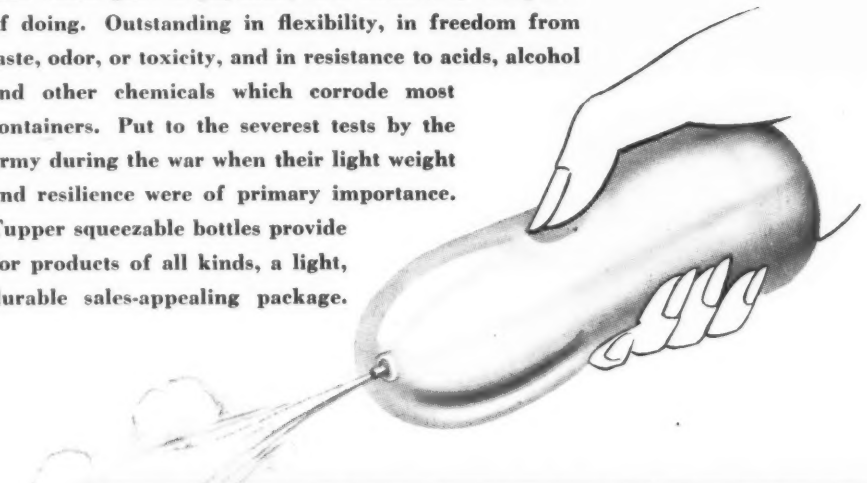
HAIR GROOMING AIDS

ANTISEPTIC SPRAYS

DISINFECTANTS · ALCOHOL RUB

AND AN UNLIMITED NUMBER OF HOUSEHOLD, HOSPITAL AND INDUSTRIAL USES

TUPPER POLY-T squeezable bottles have more to recommend them than novelty. They can do packaging jobs which glass is physically and chemically incapable of doing. Outstanding in flexibility, in freedom from taste, odor, or toxicity, and in resistance to acids, alcohol and other chemicals which corrode most containers. Put to the severest tests by the army during the war when their light weight and resilience were of primary importance. Tupper squeezable bottles provide for products of all kinds, a light, durable sales-appealing package.



THE PACKAGE THAT'S THE APPLICATOR TURNS THE PREFERENCE TO YOUR PRODUCT!

Bend it, drop it, step on it — you can't break this bottle. Tupper Poly-T saves as much as 75% on container weight, 20% in volume. Sales results on Poly-T bottled items prove that these revolutionary containers have won overwhelming consumers' acceptance.

Dept. A TUPPER CORPORATION, FARNUMSVILLE, MASSACHUSETTS · NEW YORK SHOWROOM, 225 FIFTH AVENUE © 1948 Tupper Corporation

You buy with confidence when you see the Pedigree . . . .

and in Boxes!

CONFIDENCE IN *Quality*
CONFIDENCE IN *Service*
CONFIDENCE IN *Fair Price*

THE WEIMARANER — a rare and selective breed of dog originated by the nobles in the Court of Weimar, Germany, more than 135 years ago. Marvelous all-around hunting dogs and retrievers.

YES, Union corrugated containers are pedigreed stock. They are made from 100% virgin Kraft, in the largest pulp-to-container plant in the world. Every production step is checked by a single management. And four modern box plants, strategically located, are ready to service rush orders.

Since 1872 Union has been a leader in engineering, designing, and producing paper packaging. Ten years ago, Kraft container board was added to the line and in a short time Union became one of the nation's larger producers in this field, too.

Now Union container board is going into Union's own corrugated containers, identified by the famous Union shield. This shield on a corrugated container is a mark of *consistent* quality, *consistent* service, and *always* fair price.

UNION *Corrugated Containers*

UNION BAG & *Paper Corporation*

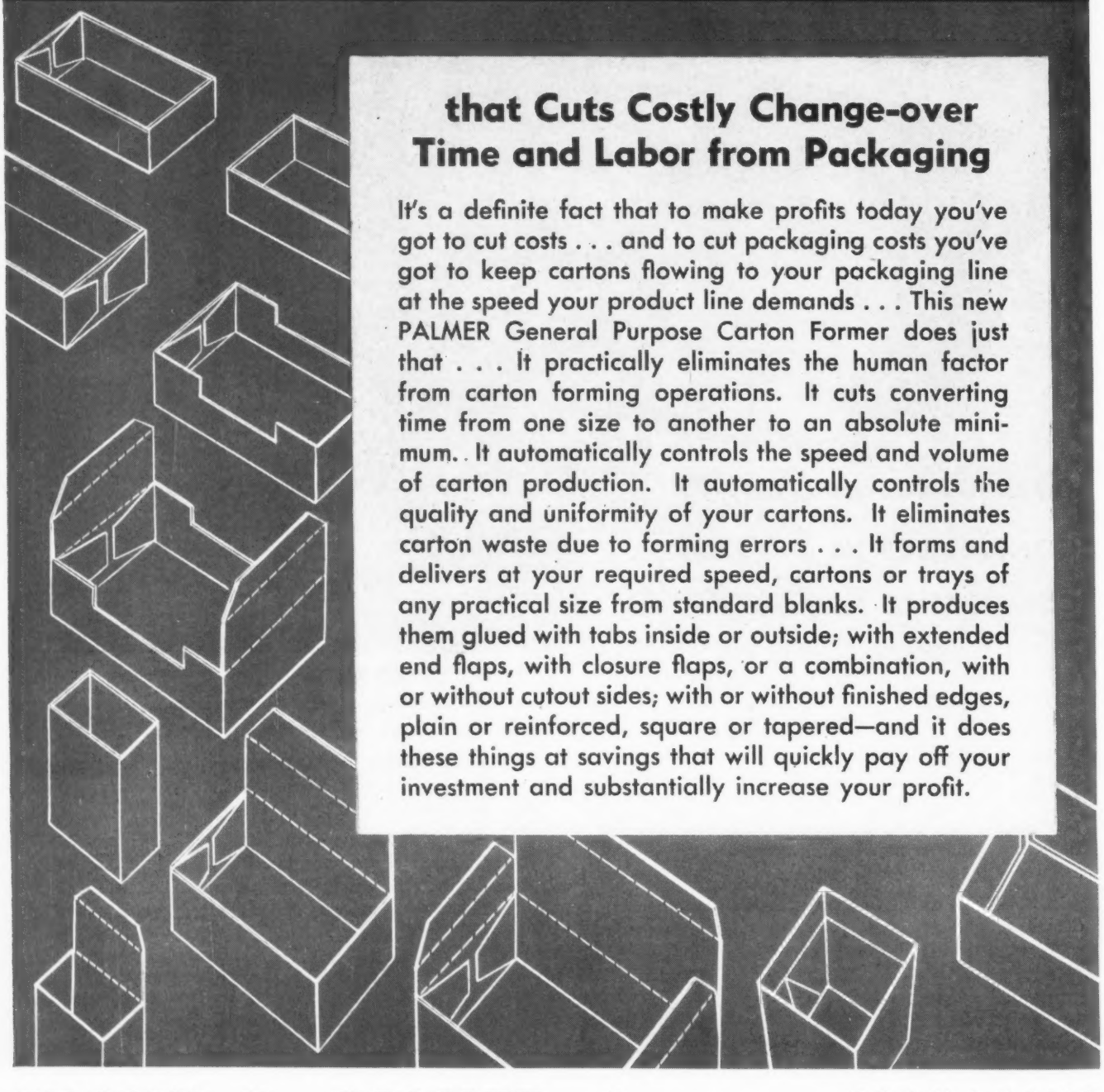
Principal Offices: WOOLWORTH BLDG., NEW YORK 7, N. Y.

***Corrugated Container Plants*: SAVANNAH, GA. • CHICAGO, ILL. • TRENTON, N. J. • JAMESTOWN, N. C. Highland Container Co., Inc.**

PALMER
CHICAGO

Presents the Remarkable New

GENERAL PURPOSE CARTON FORMER

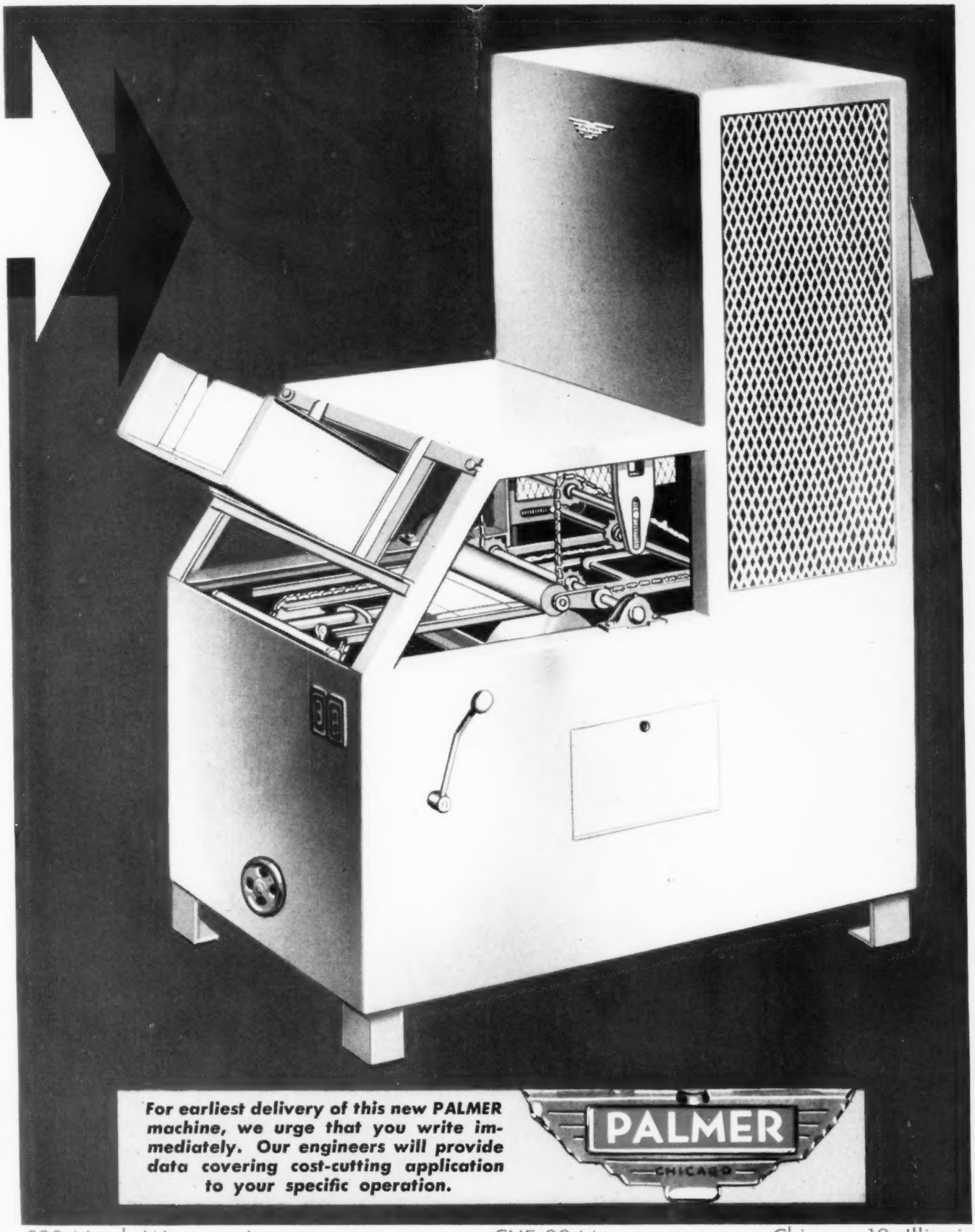


that Cuts Costly Change-over Time and Labor from Packaging

It's a definite fact that to make profits today you've got to cut costs . . . and to cut packaging costs you've got to keep cartons flowing to your packaging line at the speed your product line demands . . . This new PALMER General Purpose Carton Former does just that . . . It practically eliminates the human factor from carton forming operations. It cuts converting time from one size to another to an absolute minimum. It automatically controls the speed and volume of carton production. It automatically controls the quality and uniformity of your cartons. It eliminates carton waste due to forming errors . . . It forms and delivers at your required speed, cartons or trays of any practical size from standard blanks. It produces them glued with tabs inside or outside; with extended end flaps, with closure flaps, or a combination, with or without cutout sides; with or without finished edges, plain or reinforced, square or tapered—and it does these things at savings that will quickly pay off your investment and substantially increase your profit.

FRANK D. PALMER, Inc.

PACKAGING MACHINERY



For earliest delivery of this new PALMER machine, we urge that you write immediately. Our engineers will provide data covering cost-cutting application to your specific operation.

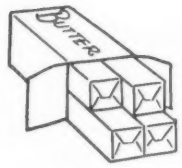
PALMER
CHICAGO

528 North Western Avenue — CHE 3344 — Chicago 12, Illinois

60 E. 42nd Street, 411 Lincoln Building — Vanderbilt 6-4185-6 — New York 17, N. Y.

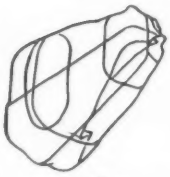
Now is a good time to check your Patapar* needs

You'll find Patapar the best paper for many jobs. It has high wet-strength. It resists grease. It is odorless, tasteless, pure of texture.



Butter wrappers

Patapar butter wrappers are furnished in popular sizes for print butter and country rolls.



Ham wrappers

Patapar wrappers give protection and make the hams look appetizing and appealing.

Cheese wrappers

Patapar is ideal as a package liner, or as a wrapper for cheese packed in cartons.

Milk bottle hoods

Patapar hoods give utmost protection and at the same time dress up the bottles. We'll print each hood with your brand name and message.

Asparagus wraps

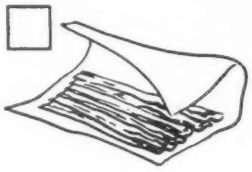
Printed Patapar wraps identify your brand and provide protection and sales appeal.

Pie doilies

Smart looking printed sheets of Patapar tell at a glance what kind of pie it is.

Fish wrappers

Patapar is ideal for fillet and dried fish wrappers, box and carton liners, canned seafood liners.



Bacon wrappers

Patapar wrappers make an attractive package for sliced bacon. Pleasant to handle. Outside surface stays clean.

You can have Patapar plain or printed

If you want your Patapar printed we'll do it for you in our own plants. Here expert craftsmen turn out the work beautifully and economically in one color or several colors. It's a complete printing service for Patapar. We'll create designs for you, do the art work, typesetting, make engravings - handle every detail.

Patapar Keymark

The Patapar Keymark is nationally advertised as the symbol of wrapper protection. You are welcome to include the Keymark on your printed Patapar wrappers at no extra cost. It's a way to remind customers that your product is well protected.

*Reg. U. S. Pat. Off.

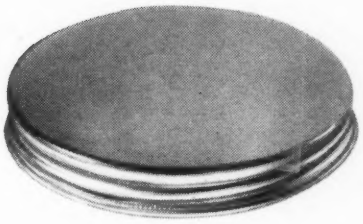
Paterson Parchment Paper Company • Bristol, Pennsylvania

Headquarters for Vegetable Parchment Since 1885

WEST COAST PLANT: 340 BRYANT STREET, SAN FRANCISCO 7, CALIFORNIA
BRANCH OFFICES: 120 BROADWAY, NEW YORK 5, N. Y. • 111 WEST WASHINGTON ST., CHICAGO 2, ILL.

AND SELL

Hazel-Atlas closures offer effective physical and chemical protection. In all standard sizes, in rich solid colors or in multi-color designs, with lithographed sales message or product information, Hazel-Atlas closures build good will.



HAZEL-ATLAS GLASS COMPANY

Wheeling, W. Va.

Sefton is Tooled for Your Package!

SHAPES

ROUND
RECTANGULAR
SQUARE
OVAL
OBROUND
TRIANGULAR

TYPES

SPIRAL
AND
CONVOLUTE

CLOSURES

Paper and metal end with spouts, dredges, perforations. Also friction plug solid top, screw top, turn top, telescope top.

Plus Sefton's String Opening Can!

The string opening can is the answer to your merchandising problem. In addition to all the inherent advantages of rigidity, appearance and protection the string opening provides tamper-proofness, easy opening, simple reclosure, full opening for filling and dispensing.

Sefton FIBRE CAN COMPANY

ST. LOUIS . . . . . NEW ORLEANS
DIVISION OF CONTAINER CORP. OF AMERICA

Write or Call **TODAY**

DISTRICT OFFICES: • Los Angeles • Salt Lake City • Denver • Dallas • Chicago • Cincinnatti • New Orleans • Boston • Detroit • Kansas City • St. Paul Omaha • New York • Cleveland • Oklahoma City • Pittsburgh • Memphis • Nashville • Seattle • Portland

It's called Christmas Decorations

THIS gay and sprightly new pattern seems to capture the very spirit of Christmas cheer. That's why, come December, holiday-wrapped gifts will glitter under forests of Christmas trees.

Shown here in black, aluminum, rose, gold and white, this design is also obtainable in many gala color combinations, printed on metallic, flint and other paper stocks.

We've made arrangements to insure prompt deliveries of single, multiple-shipment and repeat orders.

WRITE NOW FOR SAMPLES AND PRICES

KUPFER BROS. CO.
4 ASTOR PLACE, NEW YORK 3, N. Y.

Manufacturers of Surface Coated Papers Since 1845

KUPFER BROS. PAPER CO.
145 West Hubbard Street
Chicago 10
Illinois

Southwest Representatives
MODERN PACKAGINGS
1214 S. Akard St.
Dallas 1, Texas

EDWARD M. MARKS CO.
8334 West Third Street
Los Angeles 36
California

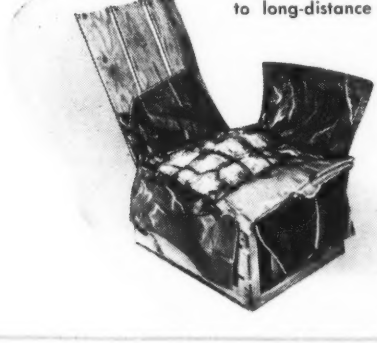
GRAHAM-JONES PAPER CO.
730 North Myrtle Ave.
Jacksonville 4, Fla.

Branches in: BOSTON • PHILADELPHIA • SEATTLE

Paper Package Pointers
FROM CYANAMID

Crate Liners Made of Wet-Strength Paper Protect Produce in Transcontinental Shipments

Perishable produce, packed in crates lined with wet-strength paper, is sprayed with ice prior to long-distance shipment.



Carrots, lettuce, celery and many leafy vegetables from as far west as California are now a commonplace sight in Eastern markets. And yet few consumers stop to consider how such perishable produce retains its harvest freshness through days of transcontinental travel.

In many cases, the answer is refrigeration plus the use of wet-strength paper. This paper, which lines the crates in which the produce is packed, provides a gentle but sturdy wrapper to protect the vegetables from injury and abrasion against the sides of the crates. Wet strength is essential in such paper, since it must withstand the moisture caused by melting ice in the refrigerator cars — sometimes for several days at a time. And when the produce arrives at Eastern markets, moist and fresh as the day it was shipped, both producers and consumers benefit from the low-cost "travel insurance" afforded by wet-strength paper.

In imparting superior wet strength to paper economically, PAREZ* Resin 607 does an outstanding job for the prepackager of food, since it converts paper into a low-cost but highly efficient prepackaging medium. Wet-strength paper bags serve as dependable containers for such foods as potatoes, apples, and citrus fruits, as well as many types of vegetables which frequently are packed, shipped or stored under conditions of high humidity . . . and which should be subjected to a minimum of handling prior to actual purchase by the consumer.

*Trade-mark of American Cyanamid Company covering its synthetic resins for use by the paper industry. The processes under which PAREZ is applied in the production of wet-strength paper are covered by U. S. Patent Nos. 2,291,079, 2,291,080 and 2,345,543 and U. S. Patent Application Serial No. 453,032.

American Cyanamid Company

Industrial Chemicals Division

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

NEW! PRODUCE BAGS
specially built for prepackaging

P-1
6" x 4" x 9"

P-2
3½" x 2¼" x 9¾"

P-3
4" x 2¾" x 10¾"

This new line of stock, cellophane bags, engineered by Dobeckmun, will help maintain and increase consumers' and retailers' country-wide enthusiasm for prepackaged fresh fruits and produce.

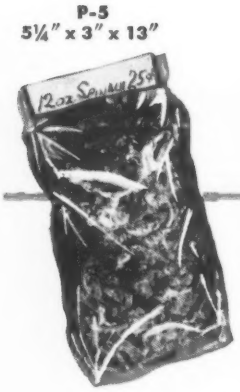
- **STRONGLY BUILT** for adequate protection from producer to kitchen, of anchor-coated, heat-sealing, moisture-proof, Dupont cellophane, with seams that stay tight against moisture.
- **FULLY TRANSPARENT,** answering all questions instantly—quantity, size, type, condition.
- **FIELD-CHECKED LINE** of six stock sizes, to meet almost 100% of prepackaging needs, saving higher cost of custom-made bags. Beautiful printing is available at low cost, for identification and brand remembrance.

P-4
4½" x 3¼" x 13"

Send for free prepackaging manual:

This *free* manual covers briefly the essentials of successful prepackaging for local distribution; filling, sealing, labeling and other important information; includes list of products with recommended bag size for most accepted packing. Ask for your copy.

You will be sure of bags that meet every requirement, when you prepackage in high-quality Dobeckmun Produce Bags. Send for samples and prices for quick delivery. *The Dobeckmun Company, Cleveland 1, Ohio. West Coast Division, Berkeley 2, California.*



P-5
5¼" x 3" x 13"

P-6
6" x 4" x 14¾"

DOBECKMUN

Self-selling packages in processed films and foils

Branches: Boston, Chicago, Cincinnati, Los Angeles, New York, Philadelphia, Portland, San Francisco and Seattle. Representatives everywhere.

TOP-SEALING YOUR CONTAINERS

so your profits can't leak out!

HOW BOSTITCH AUTOCLENCH STOPS TWO COSTLY LEAKS:

1. LOWERS SEALING COSTS

On many products shipped in corrugated containers, you can beat other top-sealing methods by giving them the Bostitch Autoclench *touch*. Yes! Just *touch* the container on the outside and the staple is clinched on the inside. As fast and easy as that! No need to insert a sealing blade; the staple closes itself.

Containers may be dusty or clean, hot or cold, damp or dry. The sealing is instant; no drying time. It's sure; no failures. It's neat; no staining nor covering up the printing. All these benefits are yours when Bostitch Autoclench does your top-sealing.

2. PREVENTS SHIPPING LOSSES

On containers suited to this method, you can't beat Bostitch Autoclench for secure fastening. Drum and drop tests have proved that. Dampness can't loosen the seal and let the contents spill out. Pilfering is discouraged — the staples can't be taken out and put back by hand without detection. But, you and your customers can take the staples out *without damaging the container* . . . a re-use *plus* that's worth big money.

A DEMONSTRATION WILL CONVINCE YOU THAT BOSTITCH AUTOCLENCH FASTENS IT BETTER AND FASTER

See how the amazing Autoclench staple closes itself. Look up your nearest Bostitch distributor in your phone book, or write BOSTITCH.

If your problem is different, ask about the complete Bostitch line of top stitchers, bottom stitchers, self-feeding hammers and tackers, and other stapling and wire stitching equipment.

Machine weighs only three pounds. A girl can handle it with ease.

At packing bench or in shipping room, Bostitch Autoclench "seals them where they are."

So quick and so portable— it can seal them as they pass by.

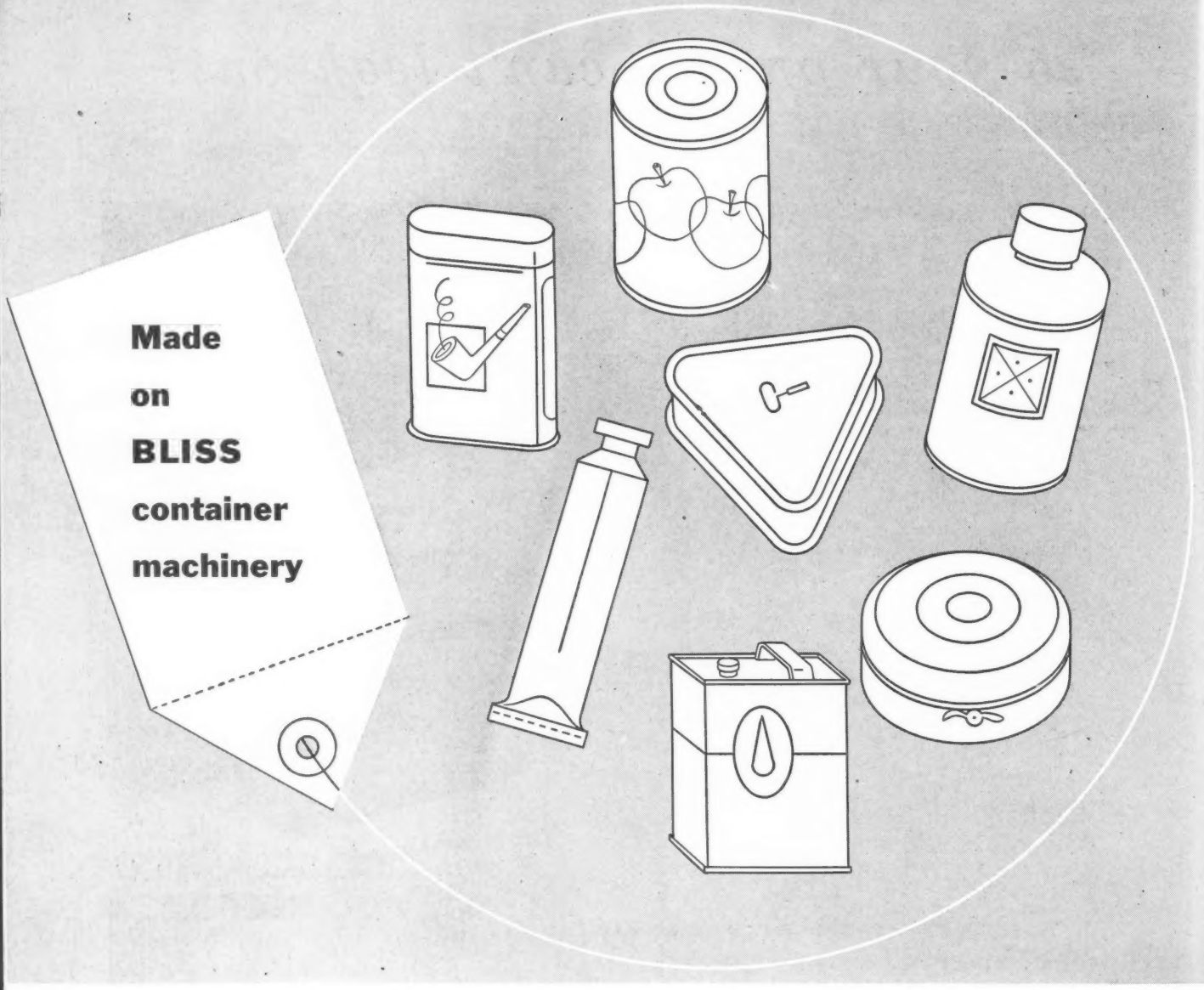
BOSTITCH
fastens it better, AND FASTER with wire
ALL TYPES OF MACHINES FOR APPLYING STAPLES
ALL TYPES OF STAPLES APPLIED BY MACHINES

BOSTITCH
516 Mechanic Street, Westerly, R. I.

Please send literature checked: ☐ #175 Bag Sealing ☐ #157 Carding ☐ #132 Shipping

Name.....
Company.....
Address.....
City.....Zone.....State.....

The unseen label on the package is BLISS



Food can or collapsible tube . . . candy box or cosmetic package . . . tobacco tin or paint can—if all the infinite shapes and types of metal containers and caps were labeled to identify the machines on which they were produced, "Bliss-Built" would be an often recognized stamp of quality on the package.

And it would identify the world's largest independent manufacturer of can and container machinery . . . the pioneer of many of the engineering advances in our modern high speed and efficient packaging methods . . . for over 90 years.

Bliss' all-inclusive range of equipment parallels the wide variety of sizes, shapes and production volume requirements from the smallest tin to the largest drum. Your container-making needs are among them—for a single machine or a complete production line.

Tell us your container-making problem. Our engineers will be glad to help work it out. Include the information in the following check-list. It will help speed back our recommendation.

How to send us your INQUIRY

The more we know about your individual requirements, the better able we will be to help you meet them. The following information is requested: 1. Dimensioned drawings • 2. Hourly and yearly production required • 3. Intended contents of container 4. Floor space • 5. Power characteristics • 6. Gas supply available where soldered cans involved.

BLISS produces machinery for making the following cans and containers:

Sanitary round cans . . . 1-5M per day; 5-gallon square . . . 1-1½ M per 8 hour day, 5-8M per day, 15-20M per day; Screw and crown caps; Square and oval cans (fish); Dry package containers; Flit cans; Paint cans; Milk cans; Butter cans; 5-gallon Kit line; Pails and Buckets; Special and irregular shapes; Drums and Barrels; Individual sheet metal working machines.

E. W. BLISS COMPANY

Container Machinery Division

Englewood, New Jersey

How Wheatena "blows the whistle" on stray metal

Electronic Metal Detector automatically safeguards total output of *four* packaging machines

● Here's an "electronic watchdog" that protects the purity and good name of your company's products.

It is the latest precaution taken by The Wheatena Corporation, at its Rahway, N. J. plant, to assure 100 per cent protection to its customers. By supplementing sieves, magnets, and visual inspection methods, it virtually eliminates the last element of chance from product inspection.

High-frequency radio waves search through each package. If metal happens to be present, the Metal Detector can either stop the conveyor, sound an alarm, or automatically remove the package in question.

Spots any kind of metal, even non-magnetic . . . Particles large or extremely small, metal or alloy-iron . . . lead . . . copper . . . brass . . . aluminum . . . stainless steel, etc. — are all detected by this modern electronic equipment. Sensitivity can be adjusted to fit your particular needs.

Detects particles even if deeply embedded . . . Reaction is completely independent of depth to which a particle may be buried. Hence, you can use the Electronic Metal Detector on any kind of non-metallic product . . . during the raw-material stage, following processing, or after packaging.

You get constant and unvarying inspection efficiency at all times . . . preserve the good will of your customers . . . protect yourself against false claims of negligence . . . reduce the possibility of costly damage to expensive processing machines. There are cases where this equipment even paid for itself the very first day of operation.

For descriptive literature, write ALLIS-CHALMERS, MILWAUKEE 1, WIS.

A 1459

Now . . . made by RCA, sold exclusively by

ALLIS-CHALMERS *Metal Detectors*

FASTER cello-wraps

means lower cost –

25,000 *and up to* 100,000 PER DAY

"Scandia"* is the word for it! With twice the capacity of the ordinary cellophane wrapping units; with a *positive* seal, and engineered to save up to 10% of cellophane on many packages, Scandia operation and economy should not be overlooked. No cams and no reciprocating action assures *smooth*, high-speed production.

Automatic intakes and discharges available. Made with or without tear-tape attachments. Electric eye available for registration of printed materials.

Write for details!

RAZOR-BLADES
CIGARETTES
TOBACCO
COUGH DROPS
DRUGS
CANDIES
FOOD PRODUCTS
HOSIERY
and similar sized packages

Model S F C

* made under Bronander patents

Scandia MANUFACTURING CO.

NORTH ARLINGTON NEW JERSEY

Now the green light says Go!

...on St. Regis multiwalls!

With our new Kraft Center at Pensacola adding 250,000,000 multiwalls a year, you can go ahead and order your St. Regis multiwall paper bags. Practically all you want! Good news for all the industries depending upon St. Regis Packaging Systems for more efficient operation.

This means you can have—at work for *you*—St. Regis packers filling St. Regis multiwall paper bags. The team *designed* to work together, in a remarkably fast and economical operation.

Constant research . . . constant new developments . . . are adding new uses all the time, for St. Regis multiwalls. We are producing these strong kraft bags tailor-made to solve problems of actual use, or of transportation or of storage. The St. Regis sales office near you welcomes discussion.

SALES SUBSIDIARY OF SR ST. REGIS PAPER COMPANY

ST. REGIS SALES CORPORATION
230 PARK AVENUE • NEW YORK 17, N. Y.

NEW YORK 17: 230 Park Ave. • CHICAGO 1: 230 No. Michigan Ave. • BALTIMORE 2: 1925 O'Sullivan Bldg. SAN FRANCISCO 4: 1 Montgomery St. • ALLENTOWN, PA.: 842 Hamilton St. • OFFICES IN OTHER PRINCIPAL CITIES—IN CANADA: ST. REGIS PAPER CO. (CAN.) LTD., MONTREAL • HAMILTON • VANCOUVER

... In Chocolate Bars

4 out of 6 buy Riegel

Four of the six largest makers of chocolate bars buy Riegel Papers regularly

Among the makers of chocolate bars, and in many other fields, you will find that most of the sales leaders are regular Riegel customers. They buy from us simply because they know we can make packaging and industrial papers that combine technical excellence with economy and production efficiency. Their confidence in Riegel is an important reason why your company—whether large or small—should see if we can also help you. Riegel Paper Corporation, 342 Madison Avenue, New York 17, N. Y.

Riegel Papers **We produce over 600 different packaging, printing, converting and industrial papers. If we don't have what you want, we can probably make it.**

Your product is in there Selling...

THE window box of Lumarith transparent film is the answer when a product:

- **requires shopper inspection**
- **needs protection during handling**
- **has eye appeal . . .**

when you want:

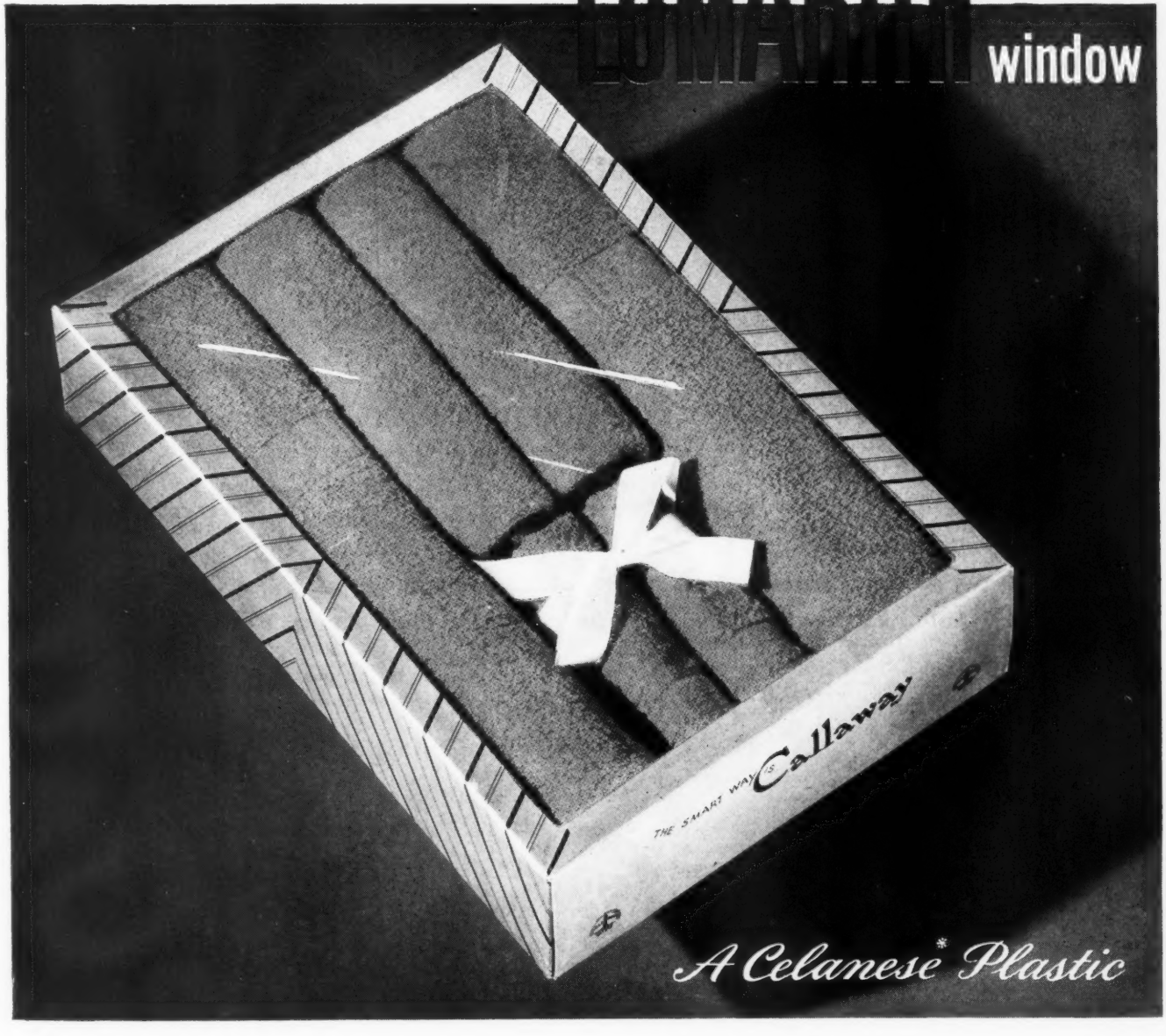
- **to swell sales through impulse buying**
- **add distinction and glamor**
- **to stand out competitively**

Lumarith transparent film has a long record of successful window box applications—from 5 cent items to luxury merchandise . . . from chewing gum to blankets. Lumarith's satin-smooth finish . . . dimensional stability . . . grainless transparency and fine printing surface have made it the first choice for quality packaging.

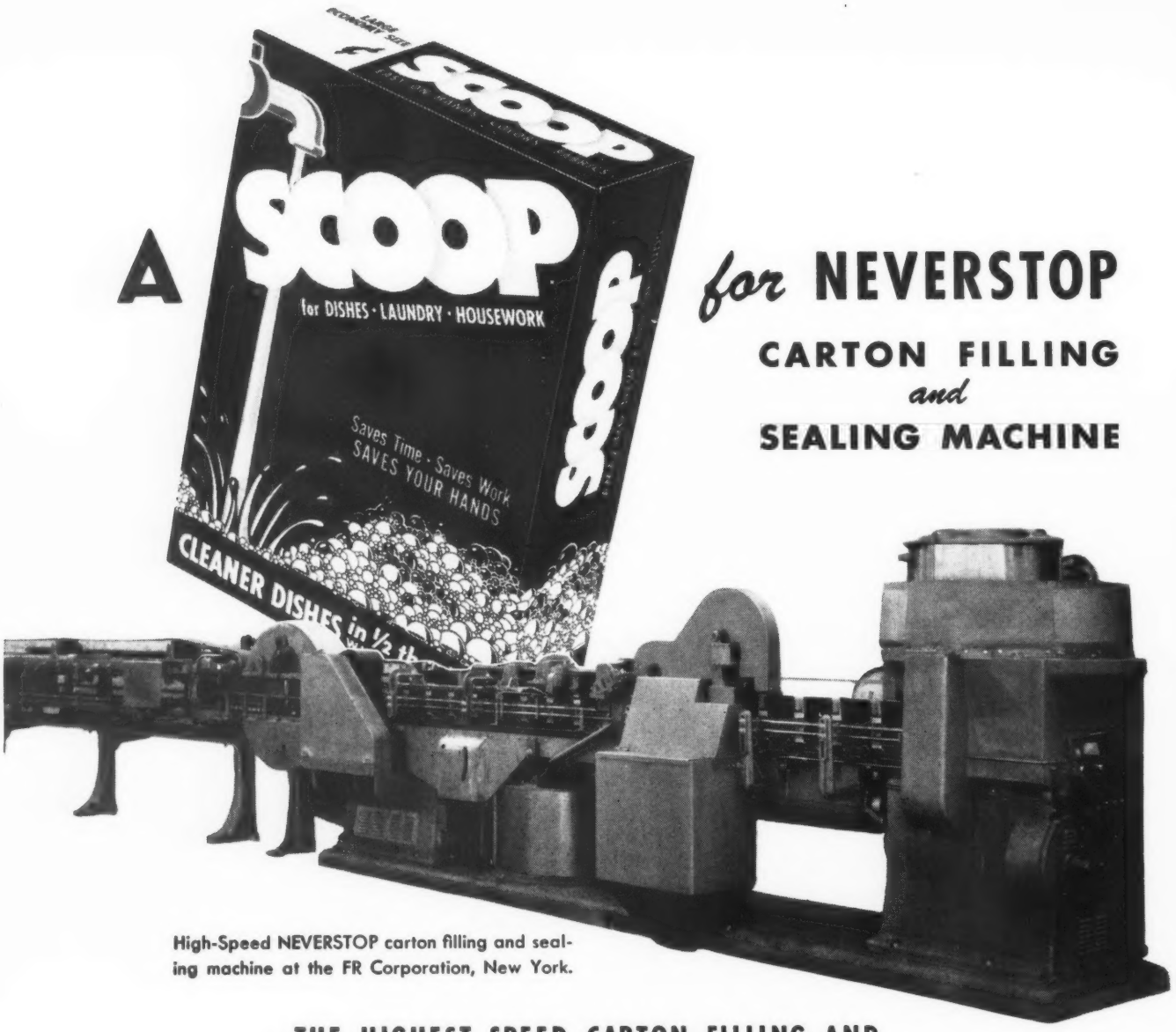
Get in touch with a Celanese representative for additional information about Lumarith film transparent packaging, and the names of convertors who can assist you with your packaging problems. CELANESE CORPORATION OF AMERICA, Plastics Division, Dept. P-1, 180 Madison Avenue, New York 16, N. Y.

When the container has a LUMARITH* window

*Reg. U. S. Pat. Off.



A SCOOP for NEVERSTOP CARTON FILLING and SEALING MACHINE



High-Speed NEVERSTOP carton filling and sealing machine at the FR Corporation, New York.

THE HIGHEST SPEED CARTON FILLING AND SEALING MACHINE ON THE MARKET

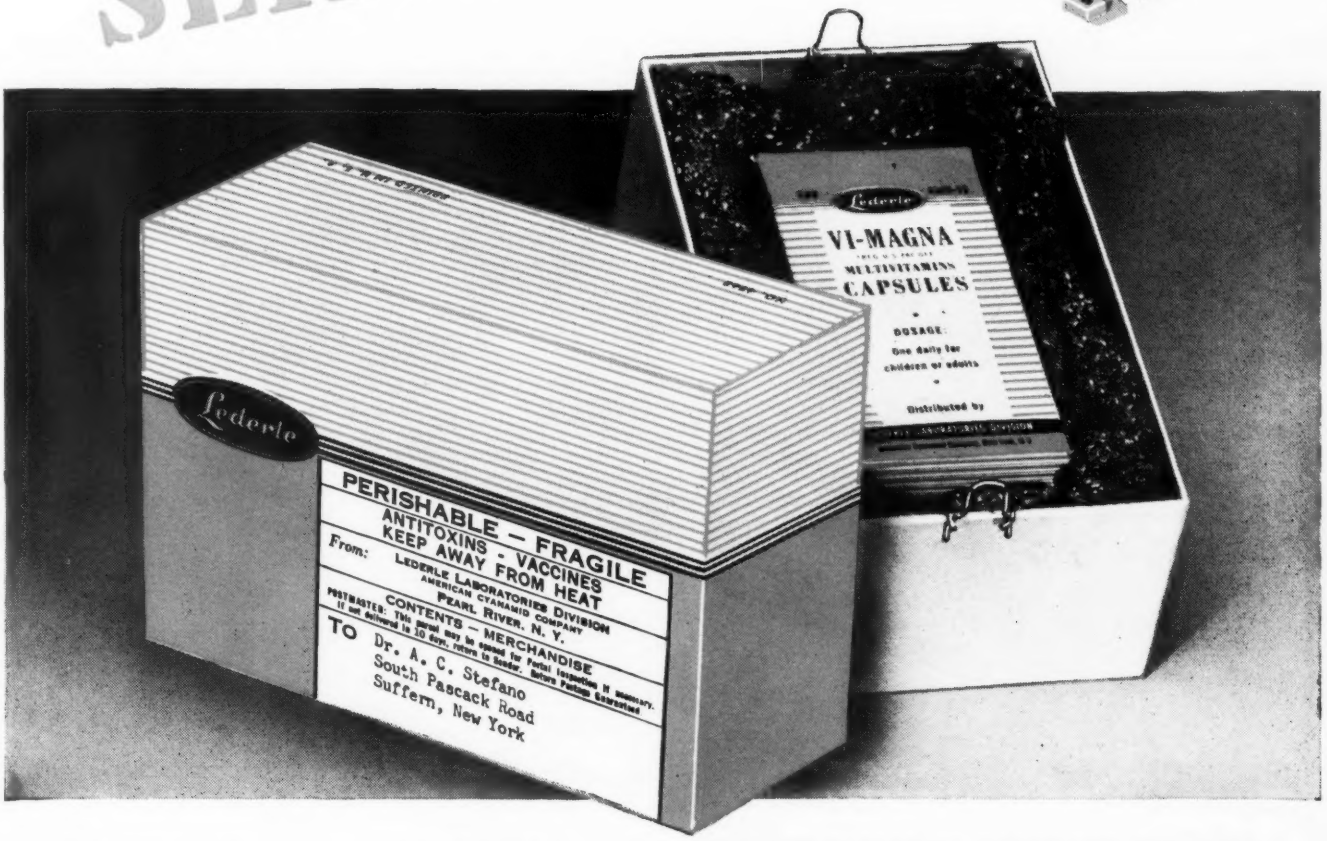
The NEVERSTOP feeds the cartons from a supply, bottom seals, fills through rotary measuring pockets, and top seals—production up to 160 packages per minute. (One customer is running at 200 per minute.)

Let us cooperate with you on your packaging and filling requirements. We make a complete line of machines to do that work.

"SPEEDS TO SUIT YOUR NEEDS"
15—30—60—160 per minute

STOKES & SMITH Co
PACKAGING MACHINERY — PAPER BOX MACHINERY
FRANKFORD, PHILADELPHIA 24, PENNA.

SAMPLING SERVICE —from soup to nuts



Yes, from "soup to nuts" describes not only the samples we can send for you, but also the completeness of our sampling service. All you have to do is:

1. ***Send us the items to be mailed.***
2. ***Send us the address lists or labels.***

From there on in it is "our baby." We design the box, pack it, put it in the Post Office. You receive Post Office receipts for the total mailing. It relieves you of all the troublesome details, and it is the most efficient, least expensive service on the market today.

REMEMBER MASON SAMPLING SERVICE!
It covers every operation from the design of the proper package to delivery to the Post Office. You may avail yourself of all or any part of this service as may best fit your requirements.

For further information in connection with your next mailing, write Department 87.

THE Mason BOX COMPANY

Main Office and Plant: Attleboro Falls, Mass.
New York Office: 175 Fifth Avenue

The Leaders prefer Mason Set-ups

a NOBLE PRESENTATION

Photo by Courtesy PARKER PEN CO.

NOBLE

The source of BEAUTIFUL and PRACTICAL PACKAGES for all users of BOXES for GIFT, DISPLAY or UTILITY PURPOSES.

STOCK LINES

For JEWELERS in various MATERIALS and COLORS. Sold through JOBBERS — catalog available.

SPECIAL BOXES

Designed and manufactured for individual and distinctive packaging — SUBMIT PROBLEMS for SUGGESTIONS and QUOTATIONS.

Since 1872

. . . . F. H. **NOBLE** & COMPANY

General Offices and Factory

559 West 59th Street — CHICAGO 21, ILLINOIS

BRANCH SALES OFFICES

NEW YORK
41 Maiden Lane

CHICAGO
29 E. Madison St.

PROVIDENCE
111 Westminster St.

PACKAGING BY *Traver*

FOR *EXTRA* PROTECTION

Traver experience in all phases of flexible packaging means extra protection for your product on its vital trip to market. Colorfully printed cellophane and glassine bags and overwraps, durable plastic films, brilliant foil, strong crush resistant Loxtite partitions. Each plays its individual, important part in Traver designed packages. On your request, we will redesign your present package to meet the higher requirements of today's competitive market or work with you in developing sales producing packages for new products you may have in mind.

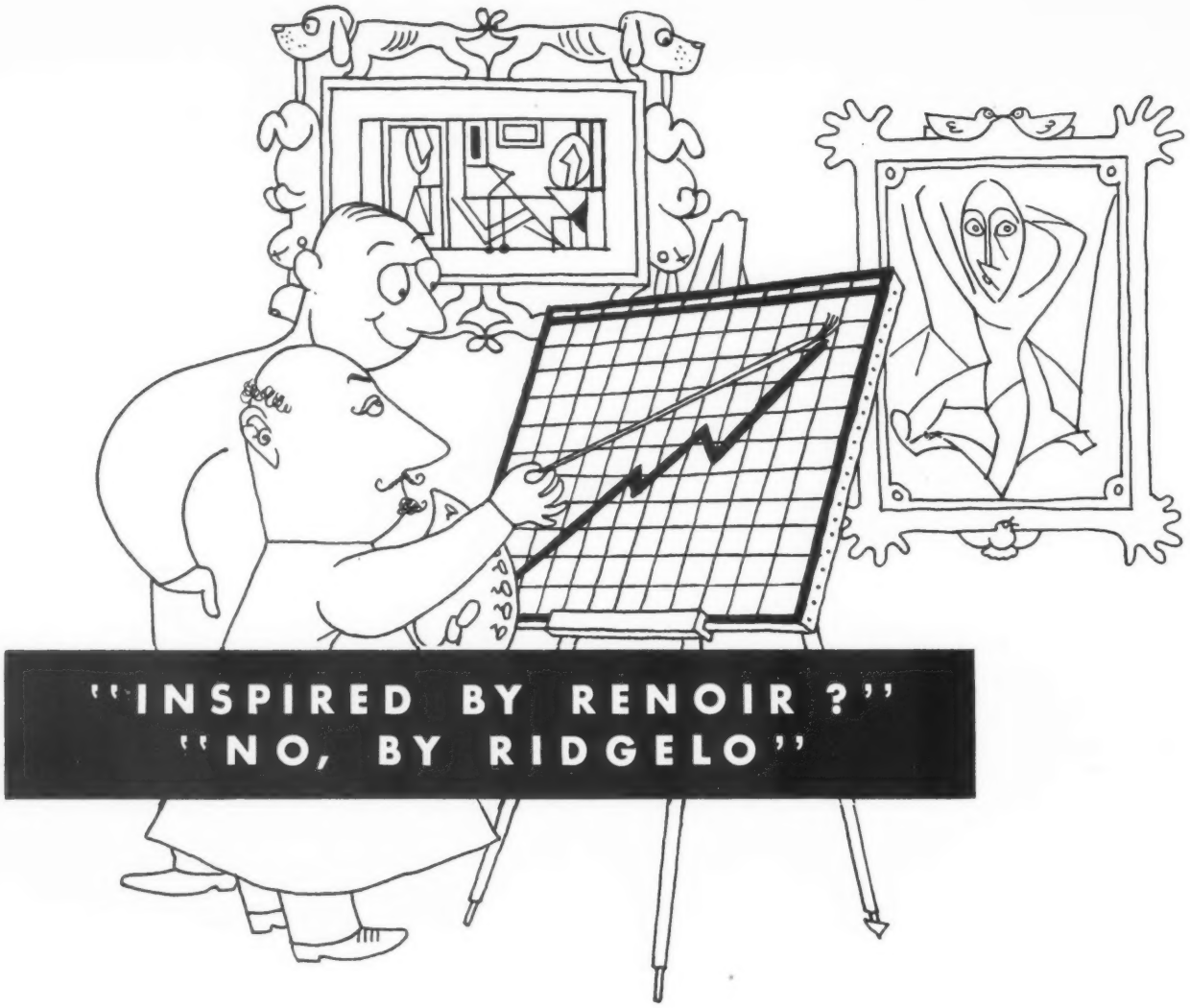
Sales Offices in Chicago, New York, Philadelphia, Pittsburgh, Cleveland, Kansas City, St. Louis, Dallas, Detroit, Oakland

Write or wire for information.

366 W. ONTARIO ST., CHICAGO 10, ILLINOIS

Traver CORPORATION

CONVERTERS AND PRINTERS OF CELLOPHANE, PLASTICS, ACETATES, FOIL AND GLASSINE



"INSPIRED BY RENOIR?" "NO, BY RIDGELO"

Rising lines across the sales charts seldom just happen . . . they're *made to happen!* And, everything else being approximately equal, the product that's most attractively packaged is a sure bet to show the sharpest rate of climb.

Making the very most of good package design, good package printing, and good package coloring, Ridgelo Clay Coated Boxboard means a big appearance plus . . . at little or no cost premium. It does so because it is *custom-made* to your requirements—in whatever finish and color is called for.

The character and quality of Ridgelo are often imitated, but are seldom if ever equalled . . . a fact that has made it first-choice among the sales leaders in packaged products ranging from specialty foods to toilet goods, from toys and novelties to drugs and luxury products.

Virtually any color can be faithfully matched in Ridgelo boxboard. The pigments are integrated with the clay coating, giving maximum color life.

The brightness, smoothness, and uniformity of Ridgelo boxboard provide a printing surface that assures real snap and contrast.

There are few reproduction limitations with Ridgelo—it works well with letter-press, offset, silk screen.

Multi-color designs, of even the most intricate type, come out clear and faithful to their originals on the mirro-smooth surface that's a Ridgelo hallmark.

Ridgelo
CLAY COATED
BOXBOARDS

MADE AT RIDGEFIELD, N. J. • BY LOWE PAPER COMPANY

Representatives:
H. B. Royce, Detroit
Norman A. Buist, Los Angeles
A. E. Kellogg, St. Louis
Philip Rudolph & Sons, Inc., Philadelphia

Do you know the answers to this food profit quiz?

1. Is the preference for glassed foods stronger among

☐ YOUNG HOUSEWIVES OR ☐ OLDER HOUSEWIVES?

ANSWER: Young housewives! Authority: a national consumer survey of packaging preferences. Here's *proof* of the growing swing to glass! Here's your opportunity to win a bigger share of the 14,000,000 "newly marrieds," now establishing their buying habits.

2. Are consumers willing to pay more, if necessary, for products in glass?

☐ YES ☐ NO

ANSWER: Yes. 57% of the consumers who prefer glass say they are willing to pay more. But your potential on this large volume of impulse sales—*extra* sales—can be rapidly destroyed by unjustified price differentials.

3. For which of these grocery items do housewives overwhelmingly prefer glass?

☐ PEACHES ☐ PEARS ☐ FRUIT COCKTAIL

☐ BABY FOODS ☐ TABLE SYRUP ☐ BEETS

☐ CARROTS ☐ BEER ☐ SALAD OR COOKING OIL

ANSWER: If you checked every box you are absolutely right. Glass sales successes follow a consistent pattern—for products that look good (fruit cocktail)—for greater convenience (corn syrup)—and for safe re-storage of unused portions (baby foods).

(Here's a current advertisement spotlighting beets in Duraglas containers.)

4. How many Duraglas Container campaigns are working for you by constantly selling products in glass?

☐ ONE ☐ TWO ☐ THREE

ANSWER: Three! One in the Saturday Evening Post—another in Ladies' Home Journal, Good Housekeeping, McCall's, Parents', and Sunset—and a third in The American Weekly. Each sells the advantages of *glassed* products directly to your customers!

SCORING

Three or four right . . . you are reaping full profits by capitalizing on the many sales advantages of glass-packed products!

Two right . . . tests in stores will prove you increase sales volume by packing in *glass!*

One or none right . . . other packers are winning customers at your expense—and because glass packaging creates *impulse* sales, you are losing the substantial amount of extra sales your products would gain in glass. 7 out of 10 consumers prefer products in glass!

Duraglas TRADE MARK REG. U.S. PAT. OFF. **CONTAINERS SELL ON SIGHT**

OWENS-ILLINOIS GLASS COMPANY • Toledo 1, Ohio • Branches in Principal Cities

this is one way to keep labels on...

...but STEIN HALL LIQUID ADHESIVES *do it much more effectively!*

Whatever your bottle labeling problems—
cold, wet, hot, greasy
or foil...
STEIN HALL'S *complete line of Liquid Adhesives assures you of the right answer.*
Write for quotations, samples and consultation.

STEIN HALL

285 Madison Avenue, New York 17, N. Y.

BOSTON • BUFFALO • CHARLOTTE • CHICAGO • CINCINNATI • DETROIT
LOS ANGELES • NEW ORLEANS • NEW YORK • PHILADELPHIA • PORTLAND, ORE.
PROVIDENCE • ROCHESTER • ST. LOUIS • SAN FRANCISCO • TORONTO, CAN.

Why

A PLASKON MOLDING COMPOUND

IS USED FOR THIS MODERN PRODUCT AND ITS PACKAGING

PLASKON MOLDED COLOR

lends both beauty and utility to the

TELEX HIGH FIDELITY HEARING AID

TELEX, Minneapolis, world-famous pioneer in hearing-aid developments, secures a practical 100% utilization of the many varied features of Plaskon Molded Color, in the Telex battery case, earpiece, and display case.

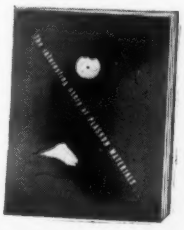
Highly desirable permanent flesh tones for the earpiece are attained with Plaskon. The molded material is warm to the touch. It is light in weight, but strong and sturdy. The non-porous surface is not affected by weak acids and skin moisture. It can be kept clean and sanitary with little effort. Highly important in the Telex earpiece is the fact that molded Plaskon is a non-conductor of electricity.

All of these features also apply to the Telex pocket case of Plaskon Molded Color, which contains the batteries and other mechanism for the pickup and amplifying of sound.

The Telex display case, into which the battery case and earpiece are fitted, illustrates the distinctive appearance that can be attained with Plaskon Molded Color for individual requirements. The Telex display case exactly matches the flesh tones of the hearing aid units. It is handsome, attractive, rich and dignified. The Telex name and trade mark are part of the molded design.

The harmonious, attractive appearance of this entire group is an important aid in the merchandising and sales of these Telex products. Write for illustrated book showing many efficient applications of Plaskon* molding compounds to design, production and selling needs.

* Reg. U. S. Pat. Off.



PLASKON

TRADE MARK REGISTERED

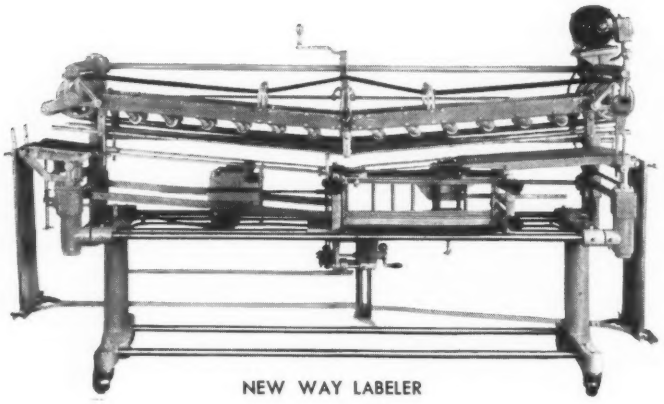
MOLDED COLOR

PLASKON DIVISION
LIBBEY • OWENS • FORD GLASS CO.
2128 Sylvan Avenue • Toledo 6, Ohio
Canadian Agent: Canadian Industries, Ltd., Montreal, P. Q.

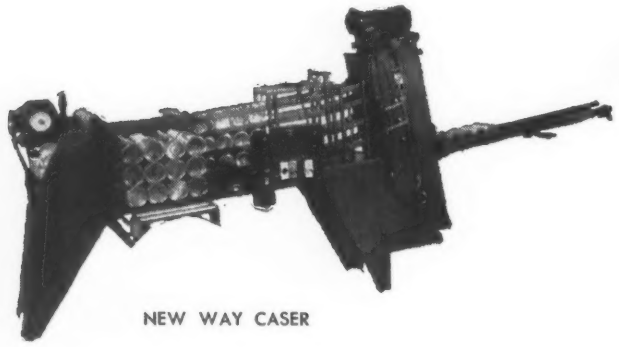
Labeling and Casing Machines

Engineered by Chisholm-Ryder—New Way To Meet Every Need of Industrial Users

Any type of wrap-around or spot labels on cylindrical containers of metal, glass or fiber can be securely applied by CRCO-New Way Labelers. Precision-built throughout to require little servicing and giving years of economical, useful service. Many exclusive features make these Labelers the most practical and versatile machines available to industry.



NEW WAY LABELER



NEW WAY CASER

Labeling Machines

CRCO-New Way Labelers are made in two sizes, to handle containers ranging from ¼-pints to gallons, in either full wrap-around or spot labels—and can also be equipped to handle long-neck bleach or other similar bottles, jugs with handles or containers with bale ears.

A simple adjustment enables the operator to change quickly from one size container to another. No complicated mechanism—nothing to get out of order.

Casing Machines

CRCO-New Way Casers are the fastest, easiest to operate and most economical Casers made. These Casers are available in several models and may be had to fill any type pack. Each model can be used as right-hand or left-hand discharge or, by addition of a few extra parts, can deliver from two sides for high speed operation.

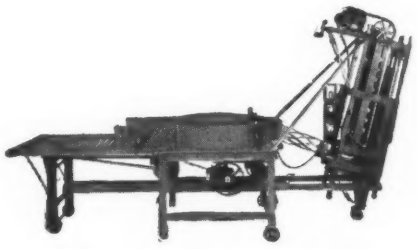
Equipped with motor-drive, electric foot switch and micro switches to control the can feed.

A CRCO-New Way Caser will reduce your packing costs.

Other CRCO-New Way Items

CRCO-New Way can also supply special Glass Washing and Tempering Units for any size jars or tumblers. Write for details.

Send for Industrial Catalog of CRCO New Way Equipment



Feed Tables

An Accumulating Feed Table that assembles and feeds all types of containers in a single line.

THE BEST OF Everything IN LABELING AND CASING EQUIPMENT

Chisholm-Ryder

COMPANY OF PENNSYLVANIA

HANOVER, PENNSYLVANIA

Perfection Decorative Papers

add sales appeal to your product

---

box coverings
gift wrapping papers
display papers

Many rich, colorful patterns in charming combinations
for seasonal and year 'round usage.
Available in rolls and sheets • Write us for samples
This sample is Pattern #881-BD
Base stock Champion Kromekote, White
Also made in other Color Combinations.

Royal Paper Corporation

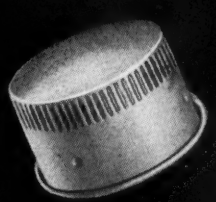
Manufacturers of Decorative Papers

210-216 Eleventh Avenue • New York 1, N. Y.

DEPENDABILITY COUNTS*

BERNARDIN
Metal Closures

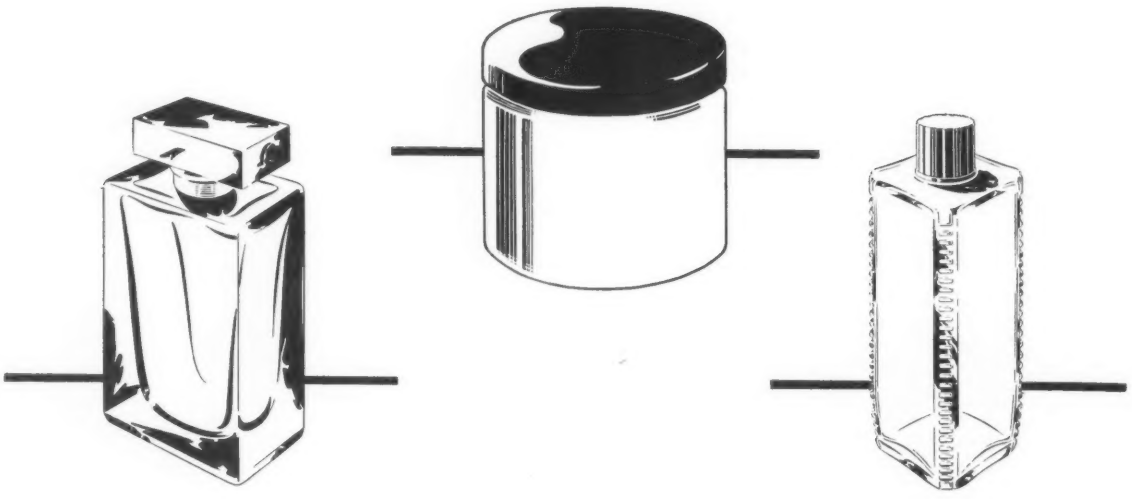
With human lives at stake, the engineer's watch must be dependable. Likewise, valuable products and prized reputations are at stake when closures are selected. Bernardin closures through the years have safeguarded many fine products—the prestige of many well known brand names. Today they're famous for dependability. Bernardin Bottle Cap Company, Evansville, Indiana.



** Dependability counts in closures too!*

Since 1881—
America's first manufacturer
of metal closures

CARR-LOWREY GLASS CONTAINERS



For more than 59 years Carr-Lowrey has been supplying many leading manufacturers with glass containers of exceptionally fine quality.

Carr-Lowrey Opal Jars bear an enviable reputation for uniformity and color. Their brilliant whiteness makes them stand out wherever displayed.

In flint glass, both handmade and machine made, Carr-Lowrey containers are widely accepted as a standard of excellence.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE 3, MD. • *New York Office:* 500 FIFTH AVENUE • *Chicago Office:* 1502 MERCHANDISE MART

GENERAL MILLS VACUUM FILLERS

for non-freeflowing and freeflowing powders give you...

FLEXIBLE SPEED

Three hundred one-pound containers a minute—two 5 pound containers a second! That's the kind of filling speed you can expect from a General Mills Vacuum Filler . . . on any type of non-freeflowing and freeflowing powder, on any kind of rigid or semi-rigid container from steel drums to tiny face powder boxes.

Speed can be perfectly synchronized with other units in your packaging line . . . and the machines can be adjusted for varying package sizes in a matter of minutes.

UNIFORM ACCURACY

No more costly "over-filling". . . No more troublesome "under-fills"—a General Mills Vacuum Filler delivers split-ounce accuracy, hour after hour with no adjustment.

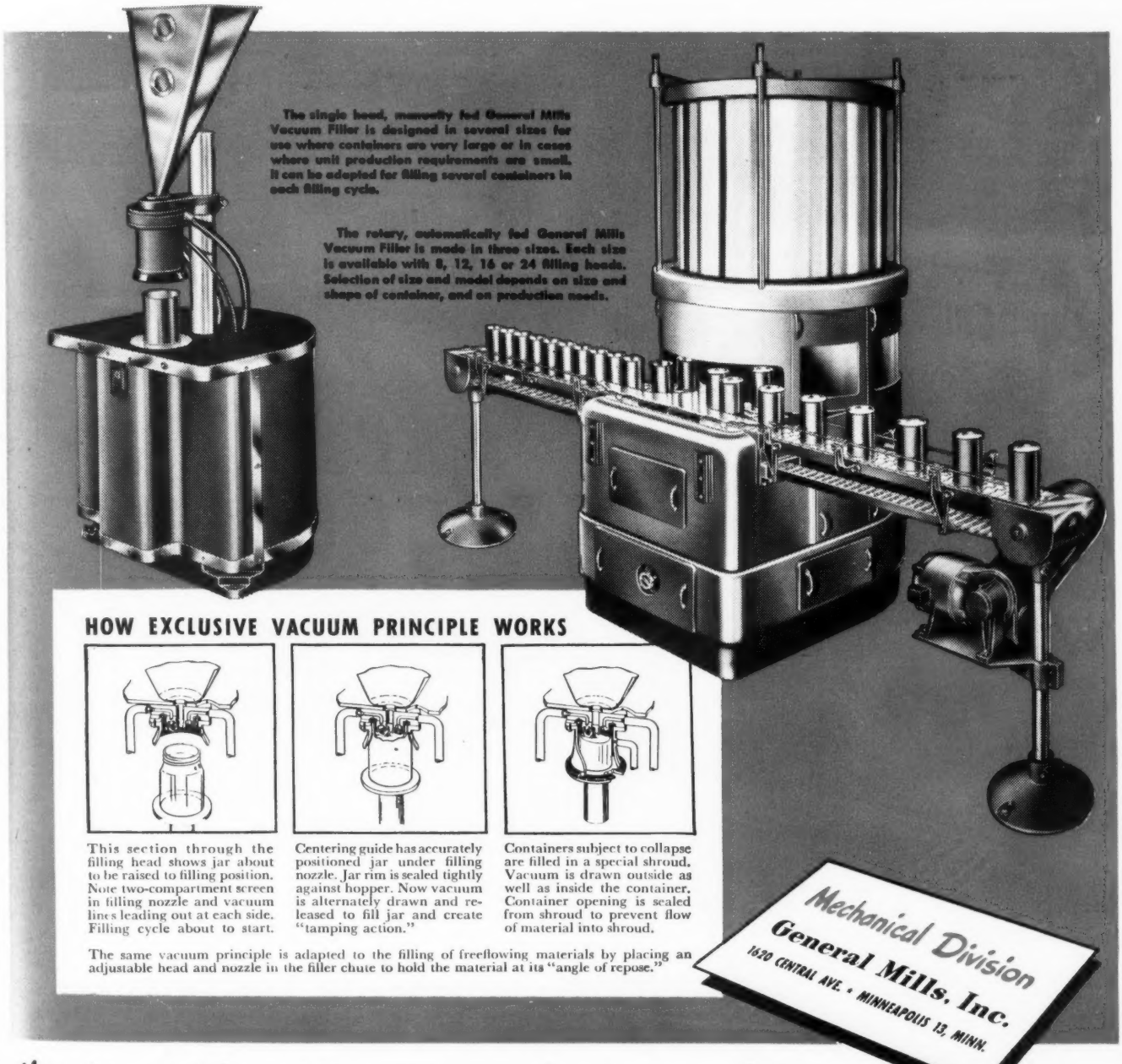
Density (volume of given weight) is controlled automatically, too. Intermittent release of vacuum during the filling cycle applies unique screen cleaning action which maintains accurate weight and volume, and eliminates the "angle of repose" which often complicates the filling of small mouth bottles and jugs.

DUST-FREE OPERATION

Imagine a dust-free filling room! Time-wasting cleanups reduced—no more wasted dollars worth of your product coating walls and floors and gumming up costly machinery.

When you use a General Mills Vacuum Filler, *all* the product goes into the container . . . because filling heads are *dust-sealed*.

You improve working conditions. You cut housekeeping costs. You prolong the life of all the machinery in your filling room. You save the cost of shut-downs and repairs.



The single head, manually fed General Mills Vacuum Filler is designed in several sizes for use where containers are very large or in cases where unit production requirements are small. It can be adapted for filling several containers in each filling cycle.

The rotary, automatically fed General Mills Vacuum Filler is made in three sizes. Each size is available with 8, 12, 16 or 24 filling heads. Selection of size and model depends on size and shape of container, and on production needs.

HOW EXCLUSIVE VACUUM PRINCIPLE WORKS

This section through the filling head shows jar about to be raised to filling position. Note two-compartment screen in filling nozzle and vacuum lines leading out at each side. Filling cycle about to start.

Centering guide has accurately positioned jar under filling nozzle. Jar rim is sealed tightly against hopper. Now vacuum is alternately drawn and released to fill jar and create "tamping action."

Containers subject to collapse are filled in a special shroud. Vacuum is drawn outside as well as inside the container. Container opening is sealed from shroud to prevent flow of material into shroud.

The same vacuum principle is adapted to the filling of freeflowing materials by placing an adjustable head and nozzle in the filler chute to hold the material at its "angle of repose."

Mechanical Division
General Mills, Inc.
1620 CENTRAL AVE. • MINNEAPOLIS 13, MINN.

Made by one of the world's largest users of packaging machinery

WRITE FOR ADDITIONAL INFORMATION: GENERAL MILLS, INC., MECHANICAL DIVISION, 1620 CENTRAL AVENUE, MINNEAPOLIS 13, MINN.

PACKED IN LITHOGRAPHED METAL CANS *by* HEEKIN

THERE is no romancing in this ad. We want you to know that Heekin welcomes inquiries—large or small—from anyone planning to pack their products in lithographed or plain metal cans—and everyone who now uses cans in which to market their products. Heekin metal lithography will equal any other reproduction of color or design on metal cans . . . maybe improve it. Even if we are busy with old customers we like new ones to ask us to talk things over.

THE HEEKIN CAN COMPANY, CINCINNATI 2, OHIO

MANUFACTURER OF LITHOGRAPHED CANS SINCE 1901

Three Points— **to remember about effective packaging**

Sales . . . protection . . . economy! All three of these subjects should be considered in planning an effective package, say leading merchandising authorities.

Since 85% of a shopper's buying impressions come through her eyes, the *transparency* of Du Pont Cellophane does a direct selling job. It lets your product be its own best salesman.

And you can get chemically tailored protection to meet a wide range of packaging requirements from this material that *protects* what it shows. From Du Pont research have come more than 50 different varieties of transparent films.

Because it gives you transparent protection *at lowest cost*, you end up with true packaging economy when your choice is Cellophane (plain or printed). And Du Pont Cellophane operates with high efficiency on automatic packing machinery—another economy feature! E. I. du Pont de Nemours & Co. (Inc.), Cellophane Division, Wilmington 98, Delaware.

Du Pont Cellophane

Shows what it Protects—at Low Cost

DU PONT

REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

PUT YOUR PRODUCT IN THE NATIONAL SPOTLIGHT

Decorated to *ATTRACT*

Built to *PROTECT*

Designed to *SELL*

These sales-attracting metal containers have been designed, lithographed and manufactured by National Can for one of the nation's leading makers of toilet goods. They deliver full protection to a fine product and also provide a strong point-of-sale appeal. And the fact speaks for itself that National Cans have been ordered not for this product alone, but for other items in this manufacturer's line.

National Can offers lithography leadership not only for the drug and toilet goods industry, but for every field where a metal container must sell as well as protect a product.

With National Can you benefit from containers consistently made to rigid standards of accuracy and high quality. But that is just a part of a complete service which includes design, art, photography, color consultation as well as lithography. Consult National Can as to how the attractiveness, protection, and sales value of your containers can be improved.

6445

NATIONAL CAN

CORPORATION

Executive Offices: 110 EAST 42nd STREET, NEW YORK 17, N. Y.

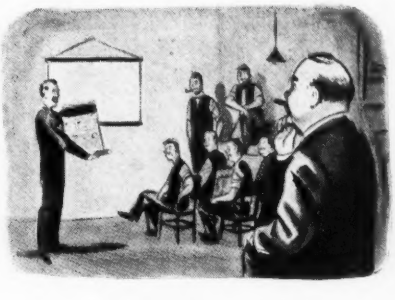
Sales Offices and Plants in: Baltimore, Md. • Indianapolis, Ind. • Chicago, Ill. • Maspeth, N. Y. • Hamilton, Ohio • Canonsburg, Pa. • Boston, Mass. • St. Louis, Mo.

"YIPE!" screams the boss, "110 bucks just to undo one bad package!"

1. "We spend 17 cents on a simple packaging job — and what happens? It arrives busted open, the goods damaged, the customer burned up. What with replacement, red tape, and a salesman's call to smooth it over — we're out $110! So I decide to have a talk with our shipping foreman —"

2. "He says he's got a tough problem. With inexperienced help and not enough of it, a few bad packages are bound to slip out. Well, maybe *all* shippers have the same problem, so I check the freight office to see if *they* can help."

3. "The claim agent says I'm not the *only* one who's got troubles. Shows me piles of damaged cartons that come in *every day*. But he gives me a good tip about a new slide film for training shippers to do a better job. I decide to follow it up."



4. "When the film is shown in our plant, I see that it's just what the boys needed. They can't *help* doing things right from now on — especially with that big wall chart that shows 'em exactly how to seal it RIGHT with gummed tape. Next month — "

5. "I see a note in my follow-up file to check shipping problems again. But I can't *find* any! No more complaints, no more replacements, no more conciliation calls by salesmen. With *that* problem off my mind, I've got more time for, er — other matters."

It was made for you — to be shown in your shipping room at your convenience — free of charge, and with no obligation. For complete information, simply write to the Gummed Industries Association, Inc., 19 W. 44th St., New York 18, N. Y.

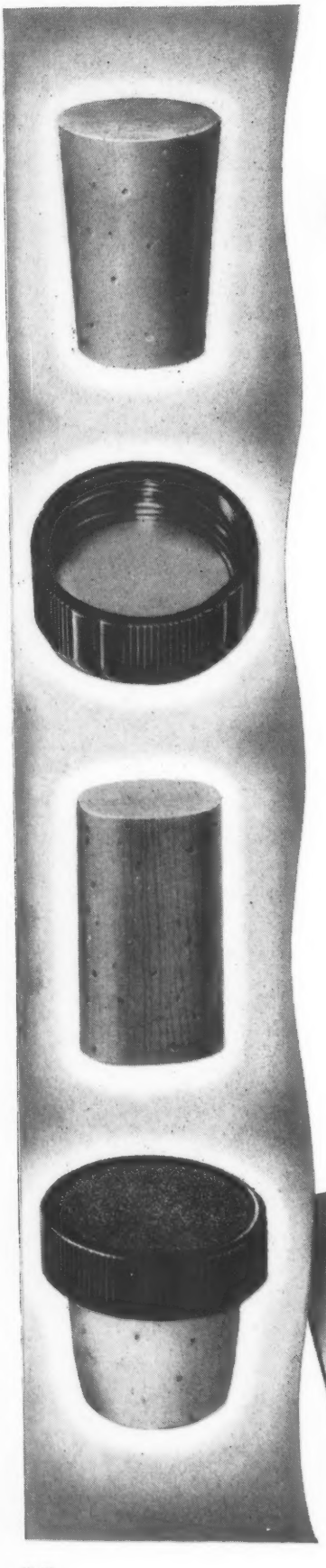
THE GUMMED INDUSTRIES ASSOCIATION

SEAL IT RIGHT WITH GUMMED TAPE

©

THE GUMMED INDUSTRIES ASSOCIATION, INC.
19 West 44th Street, New York 18, New York

GOOD PACKAGING BEGINS WITH GOOD SEALING



GOOD SEALING BEGINS WITH CORK

However distinguished the *name* on a bottle . . . the *lasting* quality of its contents depends on the security of its Cork Closure.

Nature provides the raw material . . .

Mundet, with over 80 years experience in the selection and fabrication of Cork, provides Cork Closures so dependable in their sealing service as to make them responsible for the good name of the bottled product.

Mundet Cork Closures are made in types and styles for every sealing purpose. Ask for practical suggestions on modern sealing with cork. Mundet Cork Corporation, Closure Division, 7101 Tonnelle Avenue, North Bergen, N. J.

ATLANTA
339-41 Elizabeth Street, N.E.

CHICAGO 16
2601 Cottage Grove Avenue

CINCINNATI 2
427 West 4th Street

DALLAS 1
505 Southland Annex

DENVER
The Stone-Hall Co.

DETROIT 21
14401 Prairie Street

HOUSTON 1
Commerce and Palmer Streets

JACKSONVILLE 6, FLA.
800 E. Bey Street

KANSAS CITY 7, MO.
1428 St. Louis Avenue

SAN FRANCISCO 7
440 Brannan Street
and
J. C. MILLETT CO.
118-32 Sacramento St.

LOS ANGELES (Maywood)
6116 Walker Avenue

LOUISVILLE 10
1416 Arbegust Street

NEW ORLEANS 16
315-325 N. Front Street

PHILADELPHIA 39
856 N. 48th Street

ST. LOUIS 4
2415 South Third Street

In Canada: Mundet Cork & Insulation, Ltd., 35 Booth Avenue, Toronto

MUNDET CORK CLOSURES

Aluminum Tubes Catch the Eye!

You're sure to get smart appearance . . . give your package a "come hither" look . . . when you pack your product in Alcoa Aluminum Tubes. Because of the *basic characteristics of aluminum*—inks, lacquers, and coatings may be applied more evenly to the tube and won't chip or crack in use. Even the unprinted area around the shoulder of an Alcoa Tube catches the eye because aluminum stays brighter longer.

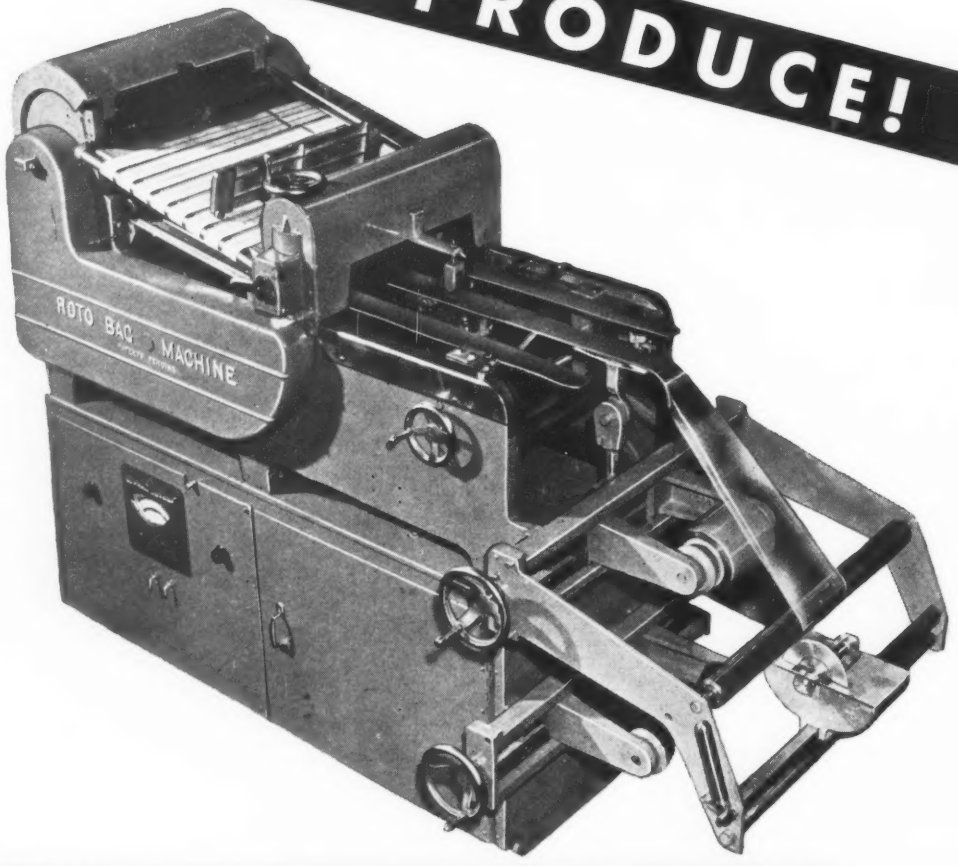
Would you like to know more? Then send a sample of your product and we'll test it in the Alcoa Packaging Laboratory. Under no cost or obligation, we will send you information that can be the "go-ahead" signal for more profitable packaging for you. Write ALUMINUM COMPANY OF AMERICA, 2129 Gulf Bldg., Pittsburgh 19, Pa.

Package It in Aluminum

SMART APPEARANCE
EASY DISPENSABILITY
GOOD ECONOMY
NON-TOXIC
GREATER STRENGTH
LIGHT WEIGHT

ALCOA
ALUMINUM

SEE IT PRODUCE!



Visit the ROTO BAG MACHINE DISPLAY

Booth 342, NEW YORK CONFECTIONERS' SHOW

Here's another opportunity to find out why the whole packaging industry is talking about the new ROTO BAG MACHINE.* At our booth, you'll see a high-speed heat sealing machine that makes stronger, better bags from such coated materials as cellophane, diaphane and aluminum foil. You'll see ROTO'S revolutionary double-action—action that seals every seam with heat and then applies an additional adhesive reinforcement for extra strength.

The ROTO BAG MACHINE is simple to operate. It is a heavy duty, precision machined unit, sold with an *unconditional guarantee*. Be sure to see this machine in operation.

**Patents Pending*

22nd ANNUAL
Confectionery
INDUSTRIES
EXPOSITION
JUNE
21-25
1948
GRAND CENTRAL PALACE
NEW YORK
65th NCA CONVENTION

ROTO BAG MACHINE CORP.

310 EAST 22nd STREET NEW YORK 10, N. Y.

IT PAYS TO "SEAL IT RIGHT" WITH GUMMED TAPE
IT'S EASY—IF YOU FOLLOW THESE SIMPLE RULES:
1 STORE TAPE PROPERLY
2 USE AUTOMATIC DISPENSERS
3 APPLY THE TAPE CORRECTLY
1. SQUARE-UP CARTON
2. SEAL CENTER SEAM
3. OVERLAP ON ENDS
4. SEAL EDGE SEAMS
5. BEND AROUND SIDES
6. FOLD CORNERS
7. FOLD & PRESS TOP
8. THE FINISHED JOB
RED STREAK SEALING TAPE
WHAT EVERY SHIPPER SHOULD KNOW
TAPE

free

Official "Seal it RIGHT" chart and manual for your shipping dept.

. . . will help you cut shipping damage to a minimum

Large 25" x 38" wall hanger

Hangs on the wall in your shipping room, always in plain view, tells you how step by step to seal your packages RIGHT. Helps you save shipping losses.

Pocket size manual

Tells in easy to read manner "What Every Shipper Should Know" and gives information on how to seal your product RIGHT for safe shipment.

Ask your RED STREAK distributor—or write to us direct.

It's so easy to "Seal it RIGHT" with RED STREAK tape

Red Streak Tape is the RIGHT tape for correct sealing. It's just good kraft, good glue and plenty of it made for the one purpose of sealing your packages easily, securely. Now with proper instructions available through official "Seal it Right" posters and manuals by using Red Streak Tapes you can be certain your cartons are sealed RIGHT.

Red Streak Sealing Tape is available in weights and widths for every sealing need. Red Streak Sealing Tape is shipped in the familiar red and yellow candy striped bundle to insure identification.

To "Seal it Right" why not insist on Red Streak Tapes? Your local paper merchant can supply your needs.

The Brown-Bridge Mills, Inc., Troy, Ohio

NEW YORK	CHICAGO	ST. LOUIS	SEATTLE	SAN FRANCISCO
389 Fifth Ave.	608 S. Dearborn	4053 Lindell Blvd.	2416 First St.	420 Market St.

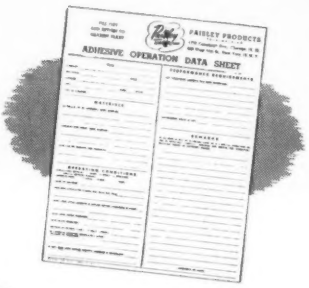
THE GUMMED INDUSTRIES ASSOCIATION

SEAL IT RIGHT WITH GUMMED TAPE

Don't Guess WHEN *YOU* BUY ADHESIVES!

IT'S *old fashioned* and *wasteful,* now, to take a chance when you buy adhesives. For, "Paisley Scientific Adhesive Service" has evolved precise, laboratory techniques for establishing the ONE best adhesive for any gluing operation. That's why more and more industries from coast-to-coast, are depending upon us for ALL of their adhesive requirements. Learn how new Paisley Scientific Methods have raised adhesive performance to a degree of perfection heretofore considered impossible! Write or wire today for an Adhesive Operation Data Sheet. No cost or obligation is involved!

SEND FOR THIS DATA SHEET NOW!



There's a laboratory-developed, tested and controlled PAISLEY scientifically designed Adhesive for practically every fabricating, manufacturing, product labeling and sealing operation. Buy adhesives the scientific way. Send for an Adhesive Operation Data Sheet. Fill in and return it to our laboratory for analysis and recommendations. Get the ONE best adhesive for the SPECIFIC operation. Write today. There's no obligation.

Paisley SCIENTIFIC ADHESIVE SERVICE

PAISLEY PRODUCTS INCORPORATED

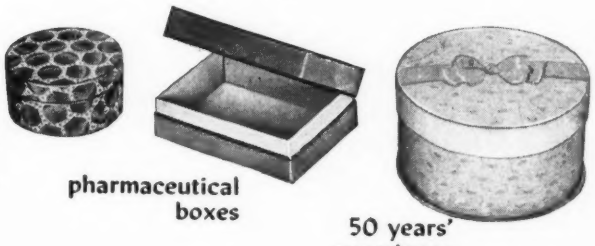
Manufacturers of Glues, Pastes, Resin Adhesives, Cements, and Related Chemical Products

1770 CANALPORT AVE., CHICAGO 16, ILL., PHONE CANAL 2220 ★ 630 W. 51st ST., NEW YORK 19, N.Y., PHONE COLUMBUS 5-2860

Charmers

On the Champs-Elysees... Fifth Avenue . . . Wilshire Boulevard . . . Rowell adds exciting charm to cosmetic boxes for face and dusting powder.

Sleek, gay, and attractive, they catch the feminine eye and find their way into the tailleur of the most sophisticated.



precision color printing

pharmaceutical boxes

50 years' experience

E. N. Rowell Co. Inc.

Manufacturers of Fine Paper Boxes

BATAVIA, N.Y.

Matchless Moments with Oxford Paper — by Tony Barlow

ADVERTISING DEPARTMENT STAGES ROYAL WELCOME FOR NEW PRINTED PIECE ON OXFORD HEAVY-WEIGHT ENAMEL PAPER

DON'T you feel like rolling out the plush carpet for a printed piece that even at first glance has "everything"? Printed pieces *do* earn special recognition—when they're printed on heavy weights of *any* of Oxford's enamel papers.

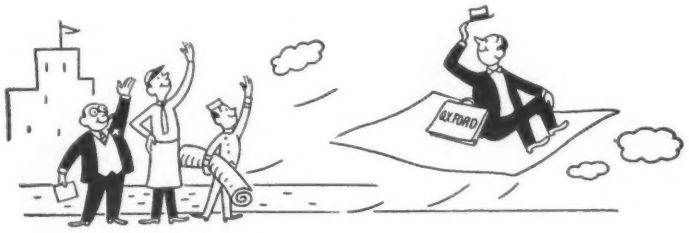
For example, your brochures, catalogs and other mailings gain in dignity—create an impression of quality and style that's sure to gain more sales. And that's a recognition that counts.

There are other special reasons why you'll want to specify the heavy weights of Polar Superfine, Mainefold, Maineflex and other Oxford enamel papers.

They have a smoother, more even surface that means clean, top-quality type reproduction. Black and white or four-color process half-tones "come clean" down to the last dot.

And you'll find the heavy weights need less make-ready — saving you time and money. Next time, specify one of these papers—and watch the way your customer welcomes superlative printing.

Keeping your customers happy is easy —when you take your paper problems to the Oxford Paper Merchant nearest you. He's at your service with the kind of practical assistance that always adds up to the finest printing results. You'll find him — waiting to help you — in any of 48 key cities coast to coast.



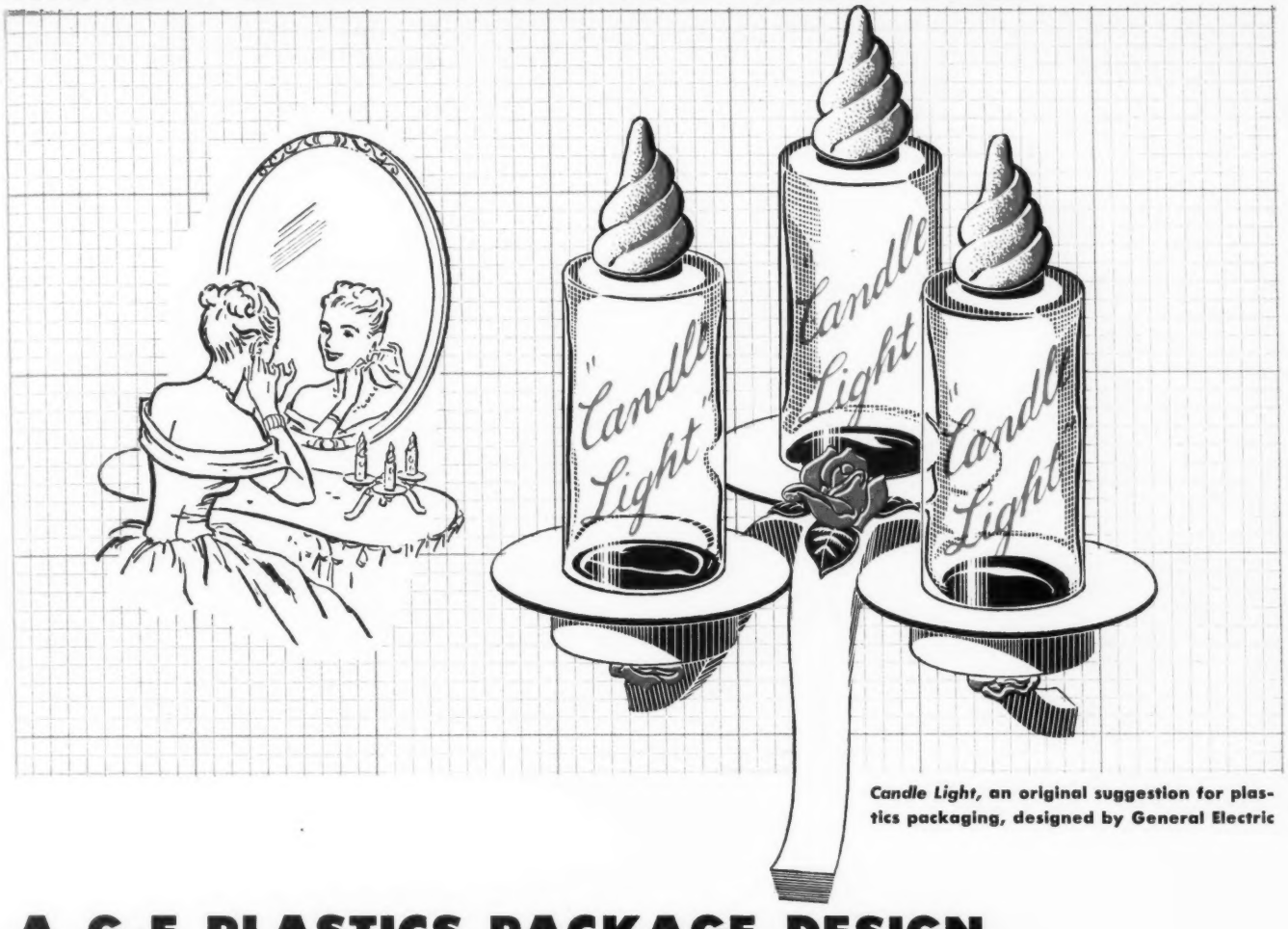
Included in Oxford's line of quality printing and label papers are: Polar Superfine Enamel, Maineflex Enamel Offset, Maineflex C1S Litho, Mainefold Enamel, White Seal Enamel, Engravatone Coated, Carfax English Finish, Super and Antique, Aquaset Offset and Duplex Label.

OXFORD PAPER COMPANY

230 PARK AVENUE, NEW YORK 17, N. Y.

MILLS at Rumford, Maine and West Carrollton, Ohio — *WESTERN SALES OFFICE: 35 East Wacker Drive, Chicago 1, Ill.* — *DISTRIBUTORS in 48 Key Cities*

DESIGNED BY GENERAL ELECTRIC AT NO. 1 PLASTICS AVENUE



Candle Light, an original suggestion for plastics packaging, designed by General Electric

A G-E PLASTICS PACKAGE DESIGN

To Flatter Her Vanity

A perfume package first of all must help sell perfume. And to be really successful, it must have *boudoir appeal!* Here's a novel plastics stand that holds three small bottles of perfume. Designed in crystal plastics by General Electric, it shows what a powerful push the proper package can give your product.

General Electric has no stock of ready-made packages at No. 1 Plastics Avenue. Instead, you'll find a wealth of packaging *ideas*. This "Candle Light" design can be yours, or you may have a special container to meet your requirements.

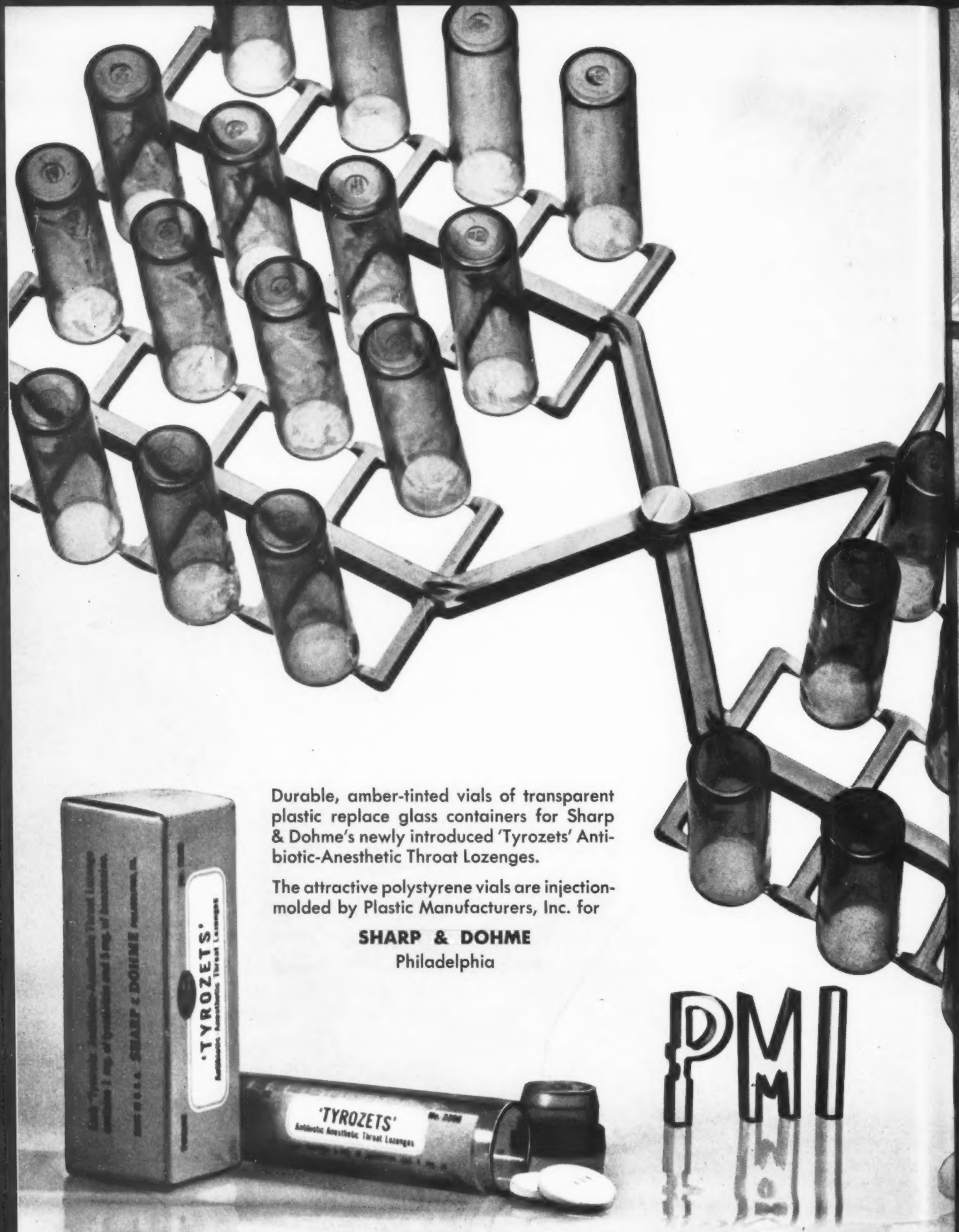
You have the advantage of complete plastics service at General Electric—design, engineering, and fabricating. And G.E., the world's largest manufacturer of finished plastics products, works with *all types of plastics materials*. You get the one that's best for your job.

Make sure you put your product in a flattering container. Get the most in sales appeal and downright utility. Why not talk it over with General Electric? Just write to *Section AB-6, Plastics Division, Chemical Department, General Electric Company, 1 Plastics Avenue, Pittsfield, Mass.*

GENERAL ELECTRIC

CD48-F3

EVERYTHING IN PLASTICS



Durable, amber-tinted vials of transparent plastic replace glass containers for Sharp & Dohme's newly introduced 'Tyrozets' Antibiotic-Anesthetic Throat Lozenges.

The attractive polystyrene vials are injection-molded by Plastic Manufacturers, Inc. for

SHARP & DOHME
Philadelphia

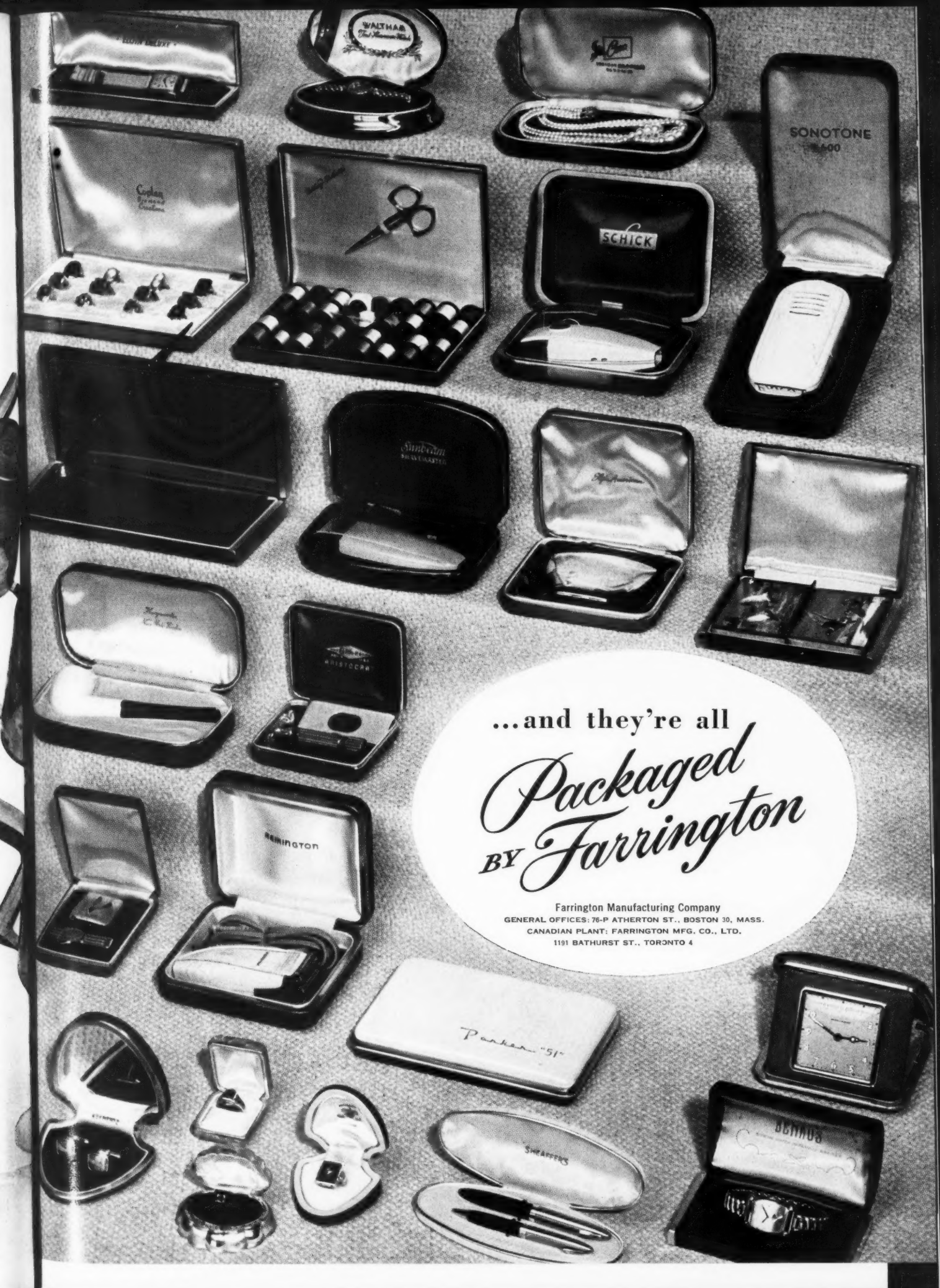
PMI

PLASTIC MANUFACTURERS

INCORPORATED

STAMFORD CONNECTICUT

INJECTION • TRANSFER & COMPRESSION MOLDING • COMPLETE ASSEMBLY



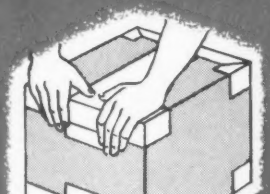
...and they're all

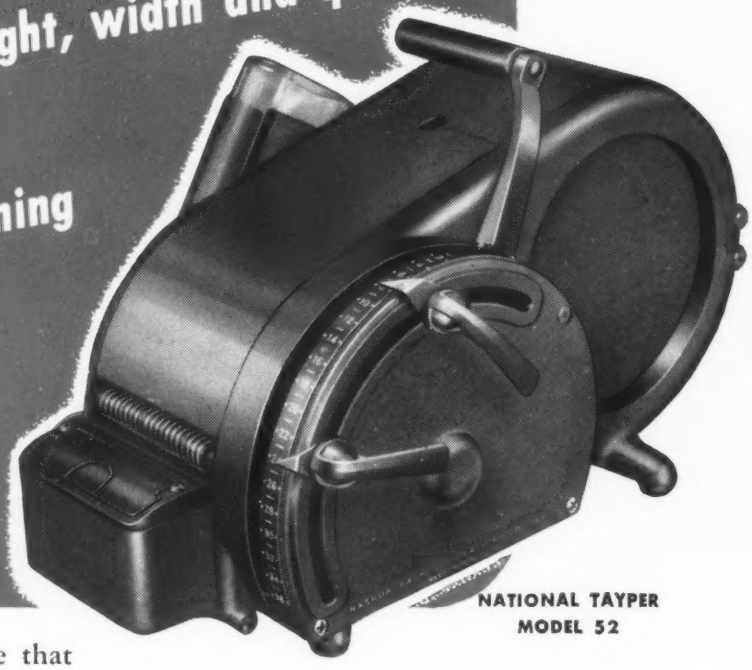
Packaged BY Farrington

Farrington Manufacturing Company
GENERAL OFFICES: 76-P ATHERTON ST., BOSTON 30, MASS.
CANADIAN PLANT: FARRINGTON MFG. CO., LTD.
1191 BATHURST ST., TORONTO 4

3 "musts"

for Perfect Carton Closure and Safe Arrival of Shipments:

1. Proper tape weight, width and quality
2. Proper → Moistening
3. Proper Application 



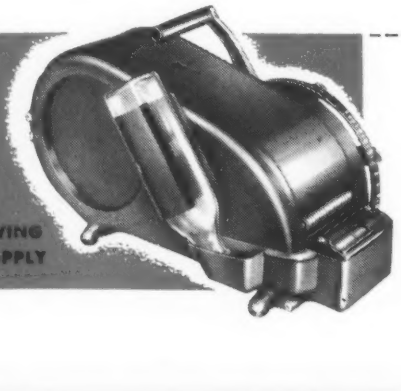
NATIONAL TAYPER MODEL 52

Proper moistening of tape by a machine that does it **automatically* is an absolute necessity for perfect carton closure to insure safe arrival at destination. A National Tayper dispenses tape that "locks" your containers to the journey's end. Moisture is *evenly* distributed over-all and you use just the amount of tape needed—no more. Tape savings mount up to 50%! And a National Tayper has the built-in speed to handle the heaviest traffic. Protect your merchandise from damage with a National Tayper—and from pilfering with printed ITSTIX tape—made by the World's Largest Manufacturer of Tape Moistening Machines and Tape. Write today for full information on Nashua's *complete* service.

*Automatic Moistening Control is endorsed by the Association of American Railroads and the Gummed Industries Association, Inc.

NASHUA

SEAL IT RIGHT WITH GUMMED TAPE



SIDE VIEW SHOWING VISUAL WATER SUPPLY

NASHUA PACKAGE SEALING CO. INC.

NASHUA, NEW HAMPSHIRE

M

Please send more facts on Nashua's 3-Point Program for Safe Arrival at Destination.

Name .....

Company .....

Address .....

Modern packaging

Vol. 21 — No. 10 — June 1948

MINIATURE PACKAGES take many forms—cartons, tubes, envelopes, sealed packets—but they resemble the sales package or are identified with it by pictorial surface design. Miniature Super Suds package was made for use in a "play-store" toy—an effective brand promotion.

SAMPLING TECHNIQUES

Revival of interest in an age-old promotional device demands new study of the trial-size package

To get people to buy his product, the maker of foods, toiletries, drugs or cigarettes must get people to try them. Sampling is one of the most basic and appealing promotional devices to achieve this purpose. To distribute samples efficiently involves just as careful package planning as does the packaging of the product itself.

Today, because of many new products on the market and because of returning competition, there is renewed interest in sampling and great activity.

In February of this year, a third-class mail shipment of 11,000,000 samples of Procter & Gamble's new Shasta shampoo was made to a distribution point in Iowa. Handled through the Reuben H. Donnelley Corp., this was reported to have been the largest mail shipment of its kind in the history of the American railroad system—filling 70 mail and baggage cars.

Custom packagers and suppliers of packaging materials to ethical drug manufacturers say that millions of samples are being mailed and distributed by special detail men to the country's 100 000 physicians and 55,000 dentists. This is a fairly consistent sampling procedure, but it is more intensive right now because of heightened competitive conditions.

Sample packages of cigarettes distributed today at conventions and other public gatherings and the many trial offers of foods and household products over the radio and in stores are further indications of the trend.

All of this activity is attracting the attention of advertising agency research directors and promotion managers in many lines of manufacture, who are making

COLLECTION of Colgate products—hotel-sized cakes of soap, two packets of new cleansing products—arranged in an acetate box makes attractive package used for institutional sampling.

TINY SHIPPING CONTAINER holds decorative St. Patrick's day sleeve containing two full packs of Lucky Strikes. One of these samples was placed at each guest's place at a recent Friendly Sons of St. Patrick's dinner. Lucky Strike slogan, "So round, so firm, so fully packed; so free and easy on the draw," is printed in Gaelic.

inquiries as to the most effective packaging for samples.

There are a great many ways in which the sampling program may be conducted and each requires its specific packaging considerations:

1. *By mail or house-to-house.* The cream shampoo campaign mentioned above was an example of this—or rather a combination of the two—since today, for large sample shipments, the Post Office Department has facilities for shipping bulk mail to various points. Sacks are simply labeled with street designations where crew men can be sent out to distribute the samples house-to-house on that street.

2. *Demonstrations* at food stores, expositions and other public gatherings, where the foods may be sampled on the spot and sometimes a package given away to take home. Food manufacturers have followed this practice quite extensively.

3. *Free samples of miniature packages* at certain social or business functions. The cigarette and chewing gum manufacturers have made wide use of this method of distribution. No small part of the success of Philip Morris has been due to the appearance of Johnny at various functions speaking his famous line, "Call for Philip Morris," and distributing sample packages of cigarettes.

4. *Sampling to jobbers and dealers*—giving several packages for the dealers to try in the belief that if they are sold on a product, then their customers are likely to be sold also.

5. *Coupons* in magazine, newspaper, radio or direct-mail advertising. Coupons may also be distributed by the house-to-house method. They are usually redeemable by sending to the company for a free sample or a trial size accompanied by a coin. Sometimes they are redeemable at a neighborhood store for a full size with the purchase of another package.

6. *Distribution by crews* on street corners or other high-traffic-count spots. The chewing-gum manufacturers have used this method for distribution of miniature packages.

7. *The "you buy this; you get this free" idea.* A sample of one product is offered free if some other product of the same manufacturer is purchased at the same time. This does not require a special sample package if the regular consumer-sale size is used, but it frequently involves methods of taping or otherwise joining two packages together.

8. *Sampling through schools, colleges,* particularly to teachers in home economics courses.

9. *Collection of sample size packages in one box*—sometimes sold as a gift package, but with a number of products of one manufacturer for recipients to try.

SHASTA SAMPLE was a $^3/_4$-oz. jar instead of the 1-oz "personal size" counter package. Special lithographed caps tied in with the promotion, "A gift from Procter & Gamble." Mailing carton printed in magenta had feminine look with intriguing word "surprise" printed on diagonal stripes. Insert contained descriptive matter.

SHASTA
a Gift FOR YOU
LIFT BOTH SIDES TO OPEN
surprise
surprise
a Gift
IT'S A NEW miraculous CREAM SHAMPOO! it's the talk of the town! it
Your favorite drug, department, or 10c store now has SHASTA. 3 convenient sizes.

10. *Samples to the medical profession.* Drug firms are probably the largest and most consistent users of samples. Packaging for this purpose requires much study to determine proper quantities, protection of product and frequency of distribution.

11. *Selling of trial sizes* in variety and five-and-ten-cent stores. Some manufacturers sell such small sizes at very low or practically no profit, with the idea that if the customer likes what she buys, she will buy a large size next time

12. *Test sampling.* Many times it is advisable to have consumers try a product before it is put on the market. For competitive reasons, the sample package for this purpose must sometimes be a "blind" so that consumers will not know the name of the company producing it. Since the final package form may not be known at the time of the pre-testing, a special sample package must be devised. An example was the heat-sealed, foil-laminated packet for soluble tea recently sent to several thousand women to find out whether there was acceptance for such a product. Each packet was designed to hold a quantity of the soluble tea powder to make three cups of tea. The foil packet provided the necessary protection for a hygroscopic product, was easy to produce and easy to mail in an ordinary letter envelope.

Cosmetic houses can conveniently pre-test powders and creams in the sampler packages they sell in the five-and-tens. If the test must be a blind, they simply eliminate trade identification and code it. Woodbury's recently introduced new face powder was pre-tested in a mail campaign in this manner.

Obviously a sample should contain a sufficient amount of product to demonstrate it effectively. A breakfast food sample with just enough for one serving is scarcely enough for a family to try. A miniature tube

YELLOW MARGARINE. 1,500 lbs. of it, forbidden for sale, were given away free in 1/4-lb. parchment-wrapped prints by Durkee Famous Foods at Chagrin Falls, Ohio, in a unique sampling campaign to give consumers a taste of the kind of product that will be available to them if restrictions on margarine coloring are removed. Timing was a few days before scheduled Congressional vote in April. Hundred of women promised to write their senators and representatives.

INEXPENSIVE FOLDER holds a pocket sample of Solventol household cleaner. The folder provides ample space on which to illustrate shelf package and contains a special coupon offer redeemable at the neighborhood dealer.

SELF-LIQUIDATING sampler to acquaint women with $100-an-ounce Golden Orchid perfume put out by Buffum & Co., Chicago, is this ball-point-principle perfume dispenser sold for $1.49. The dispenser is filled with an 1/8 dram of the perfume, worth $1.56, and is given away free with each dispenser purchased.

DESIGN TREATMENT of professional drug samples is an important factor in getting the doctor's attention. Winthrop Stearns, Inc., has recently redesigned many of its ethical samples, introducing more appealing colors and pictorial decoration. Note old (top left) and new (lower left) Devegan catchbooks. Detailed information is inside the folders. Sometimes it is advisable to combine samples of two related products, as illustrated by the two cartons each containing bottles of vitamin tablets, wrapped together with cellophane to form a unit.

AIRLINE SALT SHAKERS were cleverly adapted to the sampling of Neocurtasal, a prescription substitute for table salt put out by Winthrop Stearns. Hemo-genin package is a cellulose acetate vial with metal screw cap—a sampling container favored by drug salesmen because of its light weight and resistance to breakage.

of tooth paste, on the other hand, is ample for the whole family to find out whether they like the taste and consistency of the dentifrice. There is wide diversity, therefore, in the sizes of samples, depending on the characteristics of the product, cost, company policies and whether the samples are free or charged for.

Some companies, especially in the food field, believe it is unfair to their dealers and creates ill will to offer too many free samples. Many of them conduct their sampling programs in the form of deals; that is, a special offer of either two regular packages or two related products in regular-sized packages for a limited time at a special price, or both for the price of one. Other manufacturers feel that the sample package, whether given free or charged for, should be smaller than the sale size. The makers of toiletries, dentifrices and chewing gum, however, who produce small packages for variety-store and vending-machine selling can often use the same small package for sampling at less than it

FOLDING CARTONS may be designed to meet the mailing requirements of many products. Illustrated is a flat type to hold several catchbooks of tablets; an end-flap type in which product samples may be further protected by board folder; two uses of specially designed two-piece sleeve cartons to hold either a collapsible tube or two round metal containers. In the right foreground is an interesting die-cut sleeve inside of which is an accordian-folded punchboard to hold several objects of different shape.

would cost to set up production for a special sample size. At any rate, each manufacturer must determine the quantity for the sample and the form of the package in accordance with his own problems and to meet the requirements of his own sampling procedure.

Design of sample package

If a special package is planned for the sampling, it is very important that its surface design be as like the regular size as possible. This establishes identity in the mind of the recipient and associates the sample with the sales package. In many cases this may be achieved easily. Small cartons may be printed exactly as their big brothers and sisters. Cream jars, toothpaste tubes, small bottles may be exact replicas of the larger ones. There is a great deal of appeal in seeing the miniature package that looks exactly like the big one. To make sure that the samples do not get into wrong channels, they should be clearly identified as "samples" or "complimentary; not for sale."

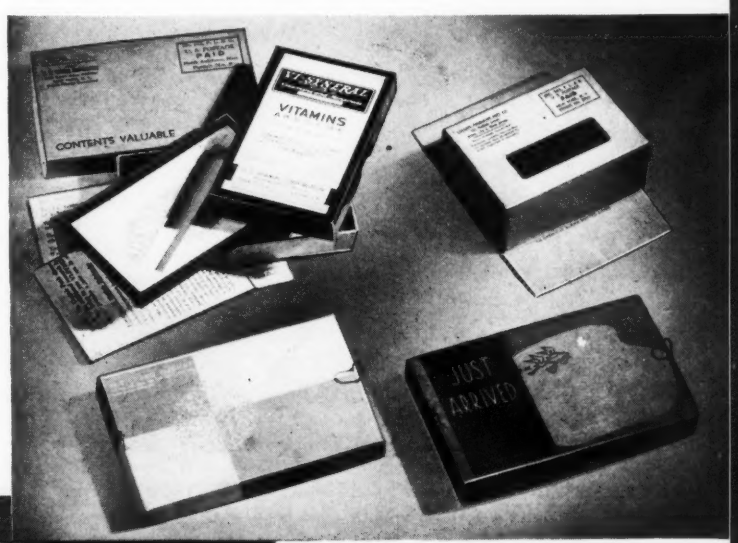
A striking current example is the tiny 1-oz. shaker-type sample package recently adopted by Winthrop-Stearns, Inc., a division of Sterling Drug Co., for Neocurtasal, a prescription substitute for persons not permitted to use table salt. It was inspired by the single-unit paperboard salt and pepper shakers used at meals on the airlines. It looks exactly like the regular-sized, larger sales packages, but is identified as "Tasting Sample." Winthrop-Stearns sent out 200,000 of these samples to doctors all over the country. So many asked for additional samples that the company is continuing this sample campaign.

In a number of cases, however, it is not possible to duplicate the sales packages in structure. Good examples are the small sleeve-type cartons used for sampling cigarettes, specially designed for this purpose.

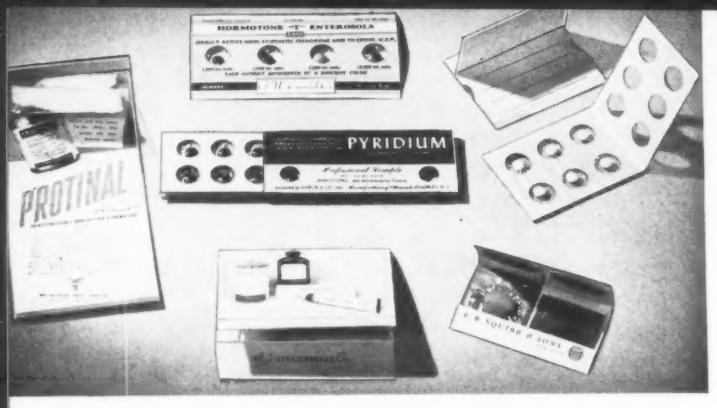
Small samples of powdered or granular products are often too expensive if reproduced in miniature cans or cartons duplicating the large packages. Many companies have found the sealed envelope or automatically produced and filled types of unit packages to be very effective for use in sampling household cleaners, face powders, medicinal powders, etc. However, many reproduce an illustration of the sales package on the face of the envelope or packet. For example, a picture of a soap carton may be printed on the face of an envelope. If the product is packaged in a can or a bottle, then the can or bottle may be shown pictorially on the envelope sample. The sample package must attract consumers to your product. Therefore, it must have the same power to get attention as the sales package.

Occasionally samplers are prepared for special occasions. A clever example was the souvenir Lucky Strike

SET-UP BOXES with or without wire fasteners have many advantages for mailing samples. They are said to save labor in setting up and may be outside printed with promotional information. The "Just Arrived" box was used for sampling a baby product. Boxes may be made with die-cut window for address on inside insert (upper right). Cover paper flap seals lid to base.



SPECIAL ARRANGEMENTS for particular types of samples. Many packets of Empirin tablets fit in simple set-up box. Small containers can be emphasized in die-cut platforms as shown by Abbott's Nembutol sampler containing bottle and three tins, cushioned with embossed cellulose wadding. Mailer is metal-edge box. Hoffman La-Roche sends catchbooks of vitamins in plain mailing envelope protected by scored corrugated. White's sulfathiazole gum, sealed in cellophane tape and accordian pleated, is put in small sleeve box and given bulk for mailing by being placed in die-cut and printed platform of a set-up paperboard box.



PUNCHBOARDS are widely used for protecting tablets sealed in cellophane tape and are an efficient way to mail samples. Open punchboard shows how tablets are arranged. The boards are placed in folding sleeves, sometimes with flaps for writing doctor's prescribed dosages. At left is a blotter with a sample of product in packet attached. Illustration of full-sized package is illustrated on blotter. In foreground is a catchbook which shows how regular-sized packages may be illustrated on the sampler. Next to it is a sampler for oral penicillin.

TRANSPARENT COMPARTMENTS are used to protect two suppositories in this miniature set-up box used by Sharp & Dohme. These samples are delivered in packers of 100 to company's detail men.

package developed by Richard J. Boylan, vice president of American Tobacco Co., for the Friendly Sons of St. Patrick dinner this spring, at which President Truman was honor speaker. At each guest's place was a miniature Lucky Strike shipping container, bearing the guest's name on a label. Inside the miniature corrugated container was a sleeve over two full-size packages of Lucky Strikes. The sleeve had printed on it a bright green shamrock tied with yellow polka-dot bow, a St. Patrick's greeting and a message in Gaelic. Inside the sleeve was a printed key to the "foreign" language—a translation of the slogan, "So round, so firm, so fully packed; so free and easy on the draw."

Improved unit packets made at high speed on fully automatic machinery from all types of flexible packaging materials selected to meet the protective requirements of the product have gained almost universal favor for the packaging of ethical drug products—both tablets and powders. These packages are light in weight, easy to mail and easy for special detail salesmen to carry around. Catchbook folders to hold the unit packs offer ample printing surface for identification and information copy. The folders may be printed so that attractive color schemes on the outside provide memory value and trade identity, while inside surfaces describe uses, dosages, etc. There is a trend in ethical sampling to give more information on product uses and directions than formerly.

The catchbook unit packs are also convenient for the doctor to give to the patient. Some drug firms have even designed the packages so that the doctor may tear off the outside cover, but leave an inside blank which he may fill in with his specific directions for dosage.

Plastic vials

Another trend in ethical sampling is the use of small plastic vials made of acetate or polystyrene with screw caps. Salesmen like these containers because of their ability to resist breakage and their light weight for carrying.

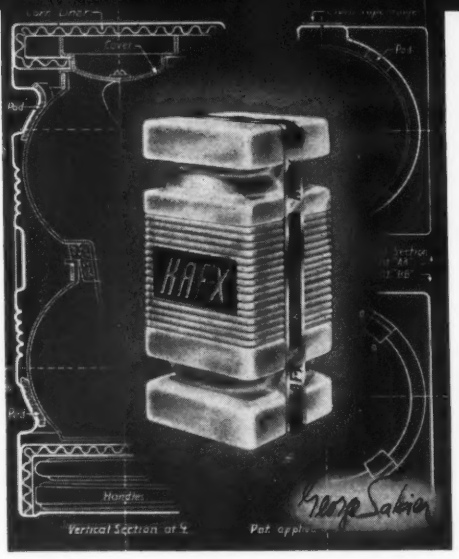
Good condition on arrival

Sampling is a relatively expensive promotion and if good money is spent to produce and distribute the samples, then every precaution must be taken to see that the product sample arrives in good condition. This is particularly important in the case of mailings. Efficient mailers of many forms are available to assure the safe arrival of the samples. Listed below are brief descriptions of the more widely used types of mailing containers:

1. *Envelopes*—Some samples in packet form ride safely in a simple mailing envelope—even a letter envelope. There are sturdier types of kraft envelopes, however, with metal clips and special fasteners. These have the advantage of light weight, which helps to keep postage costs down.

2. *Folding cartons*—The folding carton of heavy weight board is an economical and sturdy mailing container for almost any type of sample and may be designed with tuck-in flaps that make them almost tamperproof. They also are comparatively light weight, depending on the board used. They can be colorfully printed with trade identification or selling messages.

3. *Set-up boxes*—A widely used mailer for samples is the two-piece telescope set-up box, often fitted with wire fasteners. The fasteners when bent into position hold cover and base together securely. Thousands of samples are shipped annually in these boxes. They can be made in any size to accommodate any type of sample and may have die-cut inner platforms to hold contents in place. They also may be colorfully printed. In these days when it is necessary to watch labor costs, the makers of these set-up boxes claim they save considerable labor required (*Continued on page 224*)



This month's COVER PACKAGE*

No. 18 of a series

THE PROBLEM: A producer of household appliances is presumed to be seeking a new type of functional package for a glass coffee maker, with the idea that a successful and economical pack might be applied to many other fragile items in his line. The conventional method has been to pack appliances in corrugated cartons, with fragile or finished surfaces carefully padded. These cartons—often a third larger than the article itself—are then packed in bulk in shipping cases. At the point of sale it is necessary to send into the stockroom for an individual carton; unpack and inspect in the customer's presence; repack carefully and wrap into a take-home parcel. He and the merchant both feel not only that there must be an easier and less costly way to do this, but that a basically different type of package might be small enough and attractive enough for shelf stock.

THE SOLUTION: This inexpensive molded pulp container is contoured to support its contents at a few padded points, located so as practically to suspend the coffee maker in a buttressed shell. The designer prepared a blueprint, from which the model was made. The whole container is split down the middle, then taped on one side with cloth to form a hinge. To pack, it is merely opened like a book; pads are gummed at the specified points; the coffee maker is put in place, the container is then shut and the entire joint sealed with an encircling band of colorfully printed tape. At the store, if the customer wishes to inspect the product, the tape may be pulled off and the container again opened on its cloth hinge; then closed and retaped. Aside from the tape, color interest and brand identity are provided by raised panels on both front and back surfaces into which the letters "KAF-X" are debossed in molding; an ink roller passed across the surface provides the color. This design can readily be produced on automatic molding machines; the strength of molded pulp articles is directly increased by the type of internal ribbing shown.

THE DESIGNER: George Sakier, who conducts his studio on New York's E. 69th St., studied at Columbia, Brooklyn Polytech and Pratt Institute and was trained in Europe, but he started out as a machine designer. Later he turned his attention to general industrial design and his keen sense of engineering and structure is typically reflected in his Cover Package. In packaging, however, Mr. Sakier has operated almost exclusively in the field of what he calls "aromatics"—perfumes, tobacco, liquor, etc.—and the coffee-maker package is thus, for him, a bold departure. Among his regular clients are Fostoria Glass, Schenley and Dunhill. His latest Mary Dunhill perfume package, the exquisite shell-motif bottle, was illustrated in MODERN PACKAGING last month (p. 119). He holds Wolfe and Welch competition awards and was a Fellow of the Society of Industrial Designers.

GEORGE SAKIER

*** Brand and company names used in the hypothetical design are purely fictitious; the design remains the property of the designer who conceived it for this cover illustration. Any resemblance to any existing package is purely coincidental.**

Rigid

New low-cost, durable plastic container in stock sizes finds a ready acceptance

A new package form that appears to have won immediate acceptance in a variety of product fields is a rigid, molded plastic vial which, because it is available from stock in a range of diameters, lengths, colors and materials, offers economies not heretofore found in this type of container. The vials are produced by a special process under development for more than two years. Details are not disclosed by the manufacturer, but he is known to have tooled up for large-scale production.

The flat-bottomed, one-piece vial with threaded metal closure, using low-cost polystyrene, already has been adopted by U. S. Vitamin Corp., for vitamin and mineral capsules; by the Woltra Co., Inc., for its Mammoth styptic pencil; by Eagle Druggists' Supply Co., for styptic pencils and powder; by the Woodwind Co., for musical instrument mouthpieces, and by North Bros. Mfg. Co., for its Yankee Handyman drill set.

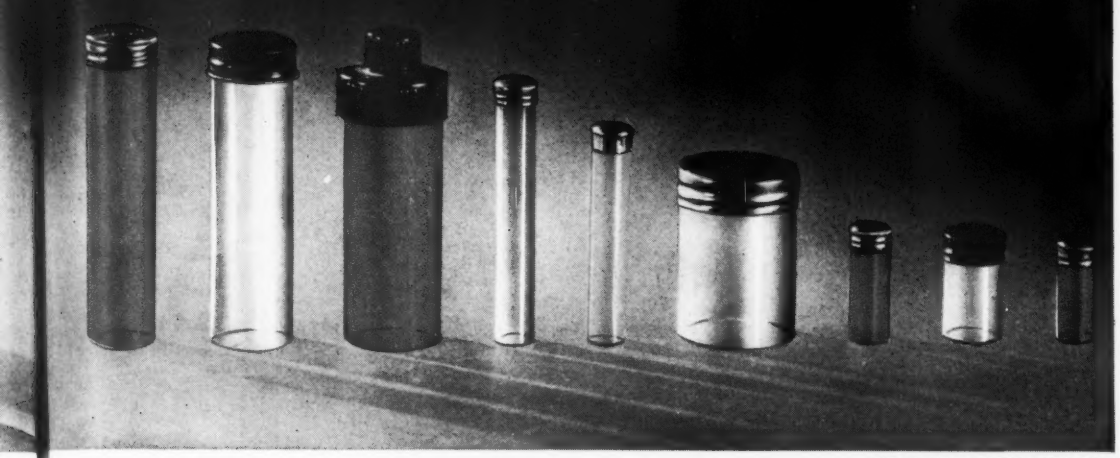
While similar in appearance to the familiar semi-rigid cellulose vial which the same manufacturer has produced for years, the new vial is quite different. The difference is apparent when the new vial is handled, for the walls of the vial (except when polyethylene is used) are rigid.

Threads are on the outside only, leaving a perfectly smooth interior wall. The older vial is manufactured by a dipping process called "solvent molding," whereas the new one is actually molded in a high-speed press. The old dipped vial is restricted as to materials and colors, while the new molded one can use any suitable thermoplastic material and can be produced with crystal-clear transparency or any opaque, translucent or transparent color.

Actually, the new vial appears destined to replace the old one almost completely, for with all its advantages and superior durability it is, according to the manufacturer, substantially lower priced. While the manufacturer is reluctant to make a direct comparison, it appears that the cost of a stock polystyrene vial in

MULTICOLOR labels can be imprinted during manufacture on clear polystyrene vials as shown by the drill set (left) and woodwind mouthpiece.

Molded Vials



ILLUSTRATED is a sampling of the sizes, shapes, colors and closure variations in polystyrene vials now available from stock through a new process of mass production. Rigidity, sparkling clarity and uniformity of size are provided in a range from $^3/_8$ by $1^3/_4$ in. up to $1^1/_4$ by $6^5/_8$ in. Any thermoplastic material in any color can be provided on order.

PHOTOS COURTESY CELLUPLASTIC CORP.

many cases will be competitive with that of a comparable glass container. It is pointed out that the plastic vial weighs only 30% as much as glass and that additional savings in shipping weight are possible because no cushioning material is necessary. The molded plastic vial is practically unbreakable.

Polystyrene is expected to be the most important material because it is low-priced and has all the desirable qualities for a wide range of products—clarity, strength, non-toxicity, acid and alkali resistance and the ability to take sparkling, jewel-like colors where desired. For the present, the line of stock containers is restricted to polystyrene and the flexible polyethylene. Other thermoplastic materials of various types can be had on special order from the manufacturer.

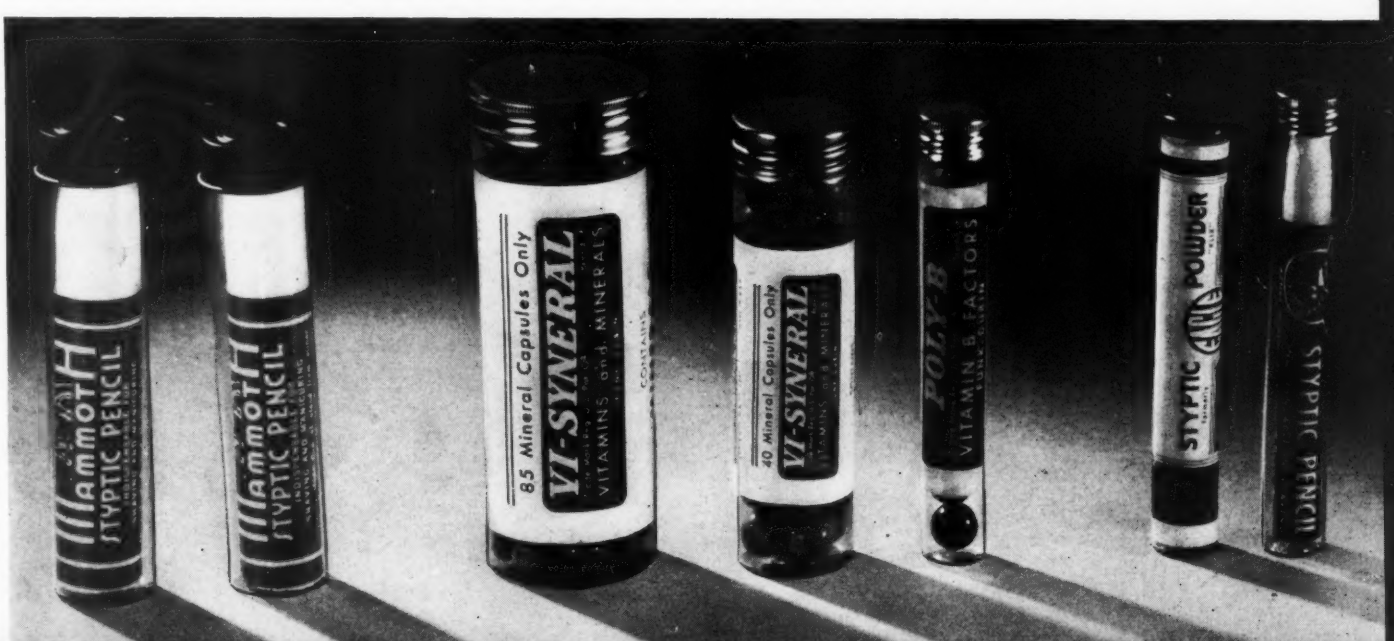
The polyethylene vial can be combined with a specially designed molded shoulder to make a squeezable, dispenser-type container for either liquid or powders. One such liquid dispenser, shown in the accompanying illustrations, has an opening designed to dispense the contents one measured drop at a time.

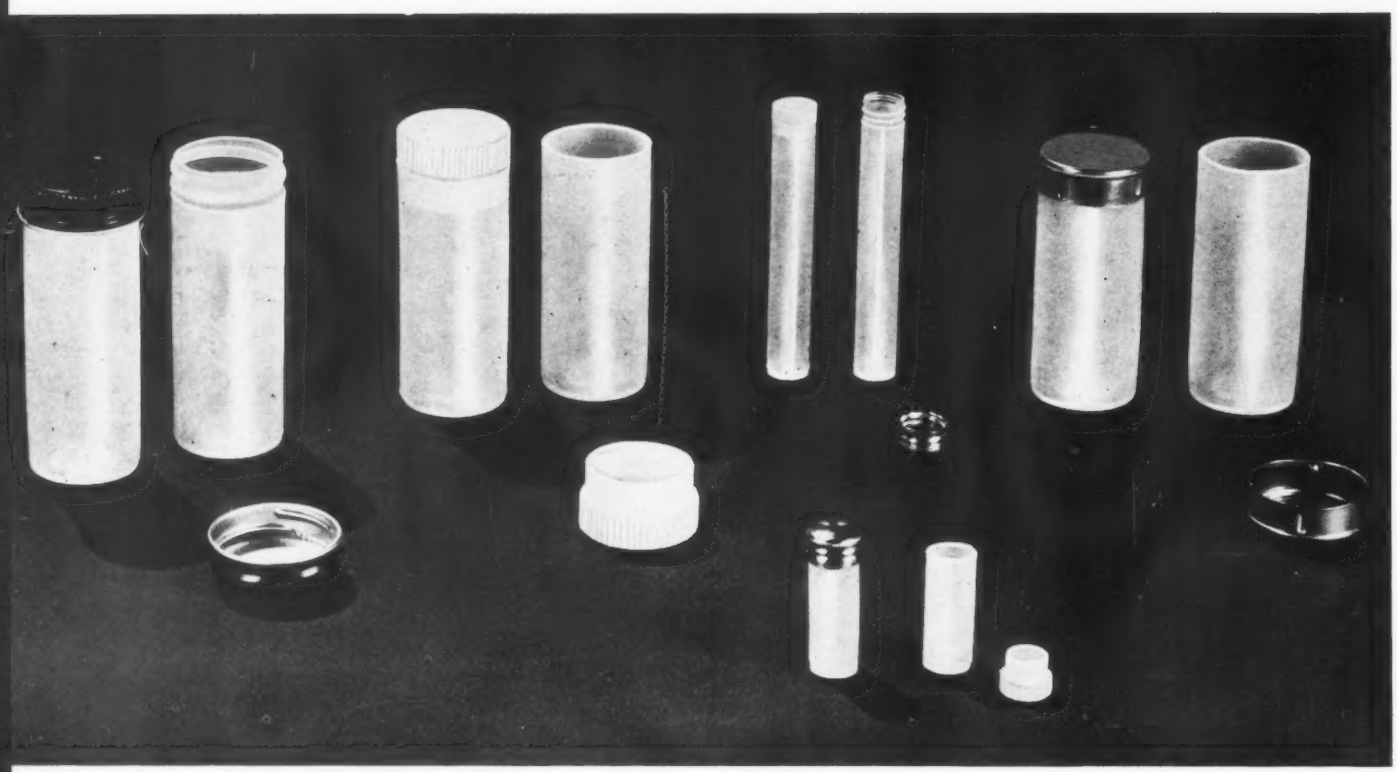
The polystyrene vials can be preprinted by the supplier in from one to five colors, eliminating paper labels.

All of those now in use are thus labeled. The printing, done during the process of manufacture, becomes an integral part of the container.

One advantage cited by users is that the plastic vials

TYPICAL USES of new color-printed polystyrene vials in drug field. Rigid walls give better protection to such products as styptic pencils and vitamin capsules. Shatterproof plastic weighs 30% as much as glass, saves on shipping costs.





FLEXIBLE POLYETHYLENE is made available for the first time in a low-cost stock vial, offering advantages to products where flexibility or chemical resistance of package is a consideration. Screw, plug or friction caps may be used.

are more uniform in size than glass vials and therefore are more easily handled on automatic filling and capping machinery. Filling or emptying the vials is facilitated by the fact that they have no inside shoulder.

The stock line at present includes vials ranging from $^3/_8$ in. to $1^3/_4$ in. in diameter and from $1^1/_4$ in. to $6^5/_8$ in. in length. Vials are available unthreaded for use with a plug-type closure or friction cap, threaded for screw-type closures, or with a shoulder for seating an outside-fitting friction cap. The threaded closure is widely used.

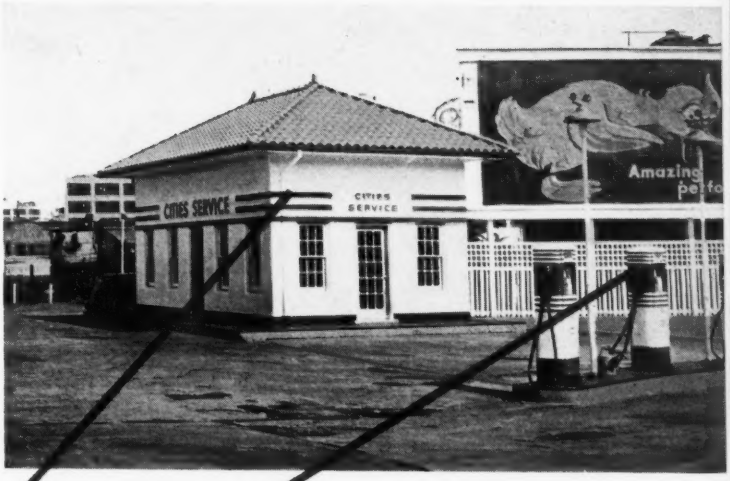
Polystyrene vials are available from stock in the clear or in transparent green, blue or amber. The flexible polyethylene containers are regularly supplied in the natural, translucent white only, but can also be obtained in any color. They cannot yet be made entirely transparent.

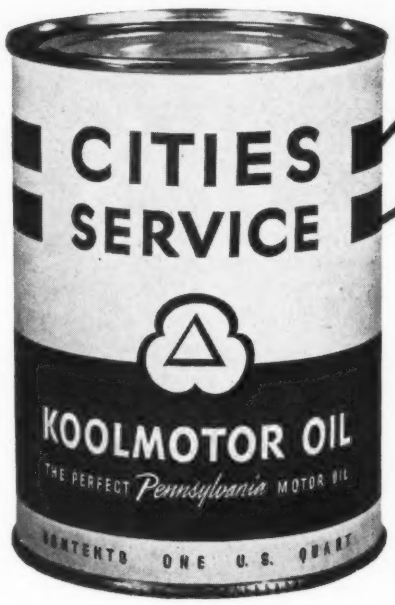
CREDIT: *"Clearsite" plastic vials developed and manufactured by Celluplastic Corp., Newark, N. J.*

POSSIBILITIES in squeezable dispensing containers are offered by design of a special shoulder on the polyethylene vial providing a shaker orifice. Either molded phenolic or polyethylene closures may be used.

SYMBOLS FOR OIL

Identifying green stripes are adopted for Cities Service station exteriors, tied to same design on 400 packages





ONE MOTIF for service station exterior—bold green stripes combined with sans serif logotype—is easily adapted to package design, giving the product complete promotional continuity.

Further proof of the powerful selling influence of identifying trade symbols is the package restyling program of the Cities Service Oil Co.

More than 400 packaged products—motor oil, lubricants and other items forming a complete line of motorist's requirements—are being redesigned to carry the new standard stripe theme, color and lettering style adopted for all of the company's service station exteriors and pumps.

Elements of the design are simple—solid green stripes with company name, "Cities Service," in bold sans serif letters, combined with the company's trademark—a triangle within a trifoliate figure, also reproduced in green.

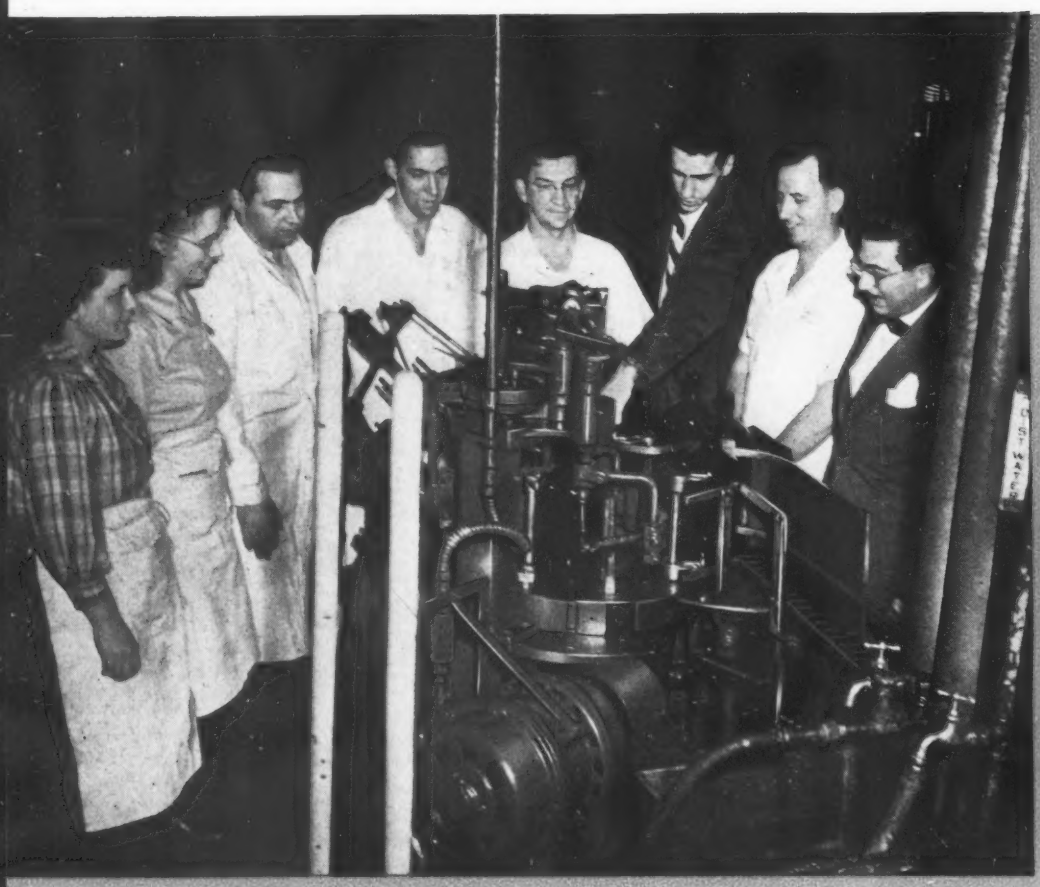
These elements, quickly recognizable and memorable, are produced also on all Cities Service vehicles, trucks and freight cars, as well as on printed promotional matter and letterheads, so that no opportunity has been overlooked in associating Cities Service with the new green symbols.

The company feels that the new packages get across the idea of motor oils more quickly than its former ones, which had a cartoon silhouette drawing of a service station operator rolling a tire. "Why have this symbol dominating the packages," the sales department reasoned, "when the products we are selling are oils—not tires?"

Stripes and trademark on the motor fuel containers are a special green against a white background—an identifying green with bluish undertones for greater contrast against the white which also has bluish undertones—adopted for all the company's promotions. Packages for the company's "premium" grade products, however, have the stripes and trademarks reproduced in red to duplicate the red used on the company's ethyl gasoline pumps. This single touch of red in the service stations, according to a recent article in *Readers Digest** on the use of the color in industry, focused attention on the "premium" pump and raised sales of premium gasoline as much as 50%. On the display racks in the service station, the red of the Cities Service premium-grade products will stand out similarly in contrast to the green of the standard-grade products and is expected to produce a similar selling impetus.

CREDIT: *Design program, Howard Kelcham, New York.*

* See "Color Punches the Time Clock," *Readers Digest*, June, 1947, p. 76.



AROUSING INTEREST of employees is the key to successful instruction. Here Neil M. Funk of the Product Administration Dept. of Eli Lilly & Co., Indianapolis, points out key parts of a labeling machine while George Kaufmann, National Adhesives sales engineer, stands by

IN-PLANT TRAINING

The human factor is still important in packaging despite advances in mechanization. Actually, today's employees must *know more*. Expert guidance in the handling of machines, adhesives and containers is needed.

The use of in-plant training courses for packaging employees, presented cooperatively by the packager and the supplier, is a growing practice that is paying dividends for many manufacturers. Success of such courses depends largely, however, on the interest and cooperation of the employees. There is a distinct technique which, through experience, has been proved effective.

Following highly successful experience at some of the leading pharmaceutical plants, a basic program of employee training has been worked out by my company. According to the reports we receive, it has been highly successful.

Our training course is, naturally, concerned with the proper use of adhesives, but this article is presented with the idea that the methods of instruction used will be of interest to other users and suppliers who may be contemplating the adoption of such courses of study.

The article will outline the requirements and standards for in-plant training. It will cover the steps by which such training is carried out. It will show the failures that training can obviate and the saving to be expected as a result.

Our courses are flexible and can readily be adapted to general or specific packaging and labeling operations. To date labeling courses have been presented in almost a score of plants. Of particular interest are the results obtained by some of the more important pharmaceutical plants.

It has been common and general practice to recall the whole lot of any drug if any evidence of label failure became apparent. While such action is necessary to safeguard both the public and the integrity of the supplier's name, it has been costly and, even more important, has sometimes unduly alarmed distributors and retailers.

In one particular instance a manufacturer who had recalled almost one hundred lots during a previous year reported that not one lot was returned because of label failure in the six-month period following the presentation of the course. To assist in maintaining this

* Sales promotion manager, National Adhesives Division, National Starch Products, Inc., New York.

record, refresher courses have been scheduled at set intervals.

All the personnel of a packaging department have been found to benefit, including those who set up and maintain the machines, those who operate them and those who supervise and inspect the work. Usually, all the basic instruction can be covered in four 1-hr. sessions.

There is one important preliminary to such a course. The company management must be sure that its machines are in the best operating condition. There must be no legitimate chance for "the carpenter to blame his tools," either as to material specification or adhesives used. Thus, it is usually desirable to have an expert survey made of the operations and materials before initiating the course.

The first introductory talk reviews the various types of packaging failures and the difficulties which lie behind them. Interest is built by backing up generalities with specific troubles that have occurred at the particular plant.

For example, the inspectors may have reported labels curled away from the bottles, wrinkled or blistered, or possibly discolored. Or there may be a record of a machine failing to pick labels out of the hopper, or tearing them at some point in the operation. Any such instance that may be cited offers a good "hook" to get attention.

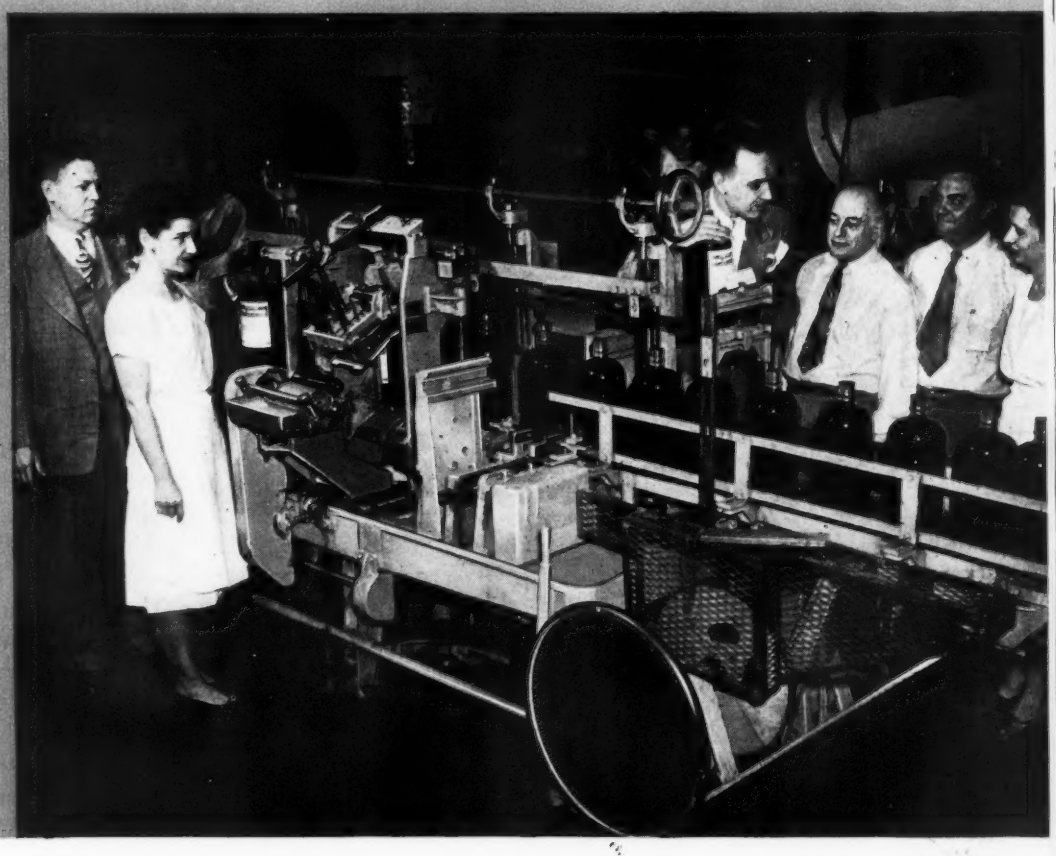
The consequences of label failure are often not fully realized by operators, so special emphasis is laid on this point. Sometimes it will be possible to cite figures on the cost of rejects, turnbacks and shutdowns. Even more impressive is the story of what happens beyond the plant.

A pharmaceutical product container that loses its label may be actually dangerous to human life, as well as to the firm's reputation. And even a product that "looks bad" on a retailer's shelf because of a loose, blistered or defective label may mean lost sales and lost income for factory employees.

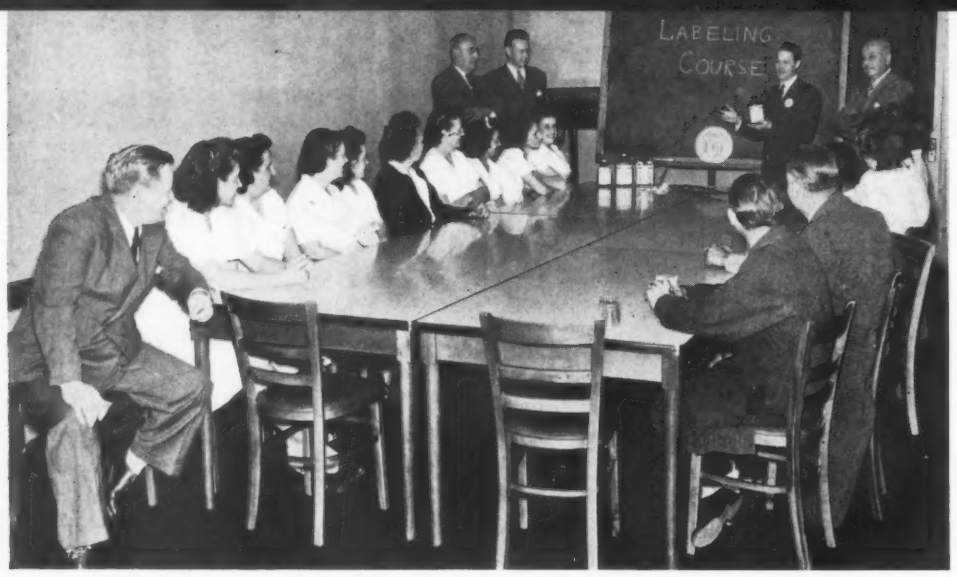
Certain cases of mold on labeled bottles and loss of labels in water coolers may be traced back to improper machine adjustments or operating practices. From the same source may stem causes of difficulties in removing labels from bottles to be re-used for products such as soft drinks and beer.

Once a full realization of the problem is created, the instructors start right in at this first session with a discussion of the more important parts of any packaging machine that must be watched and adjusted when

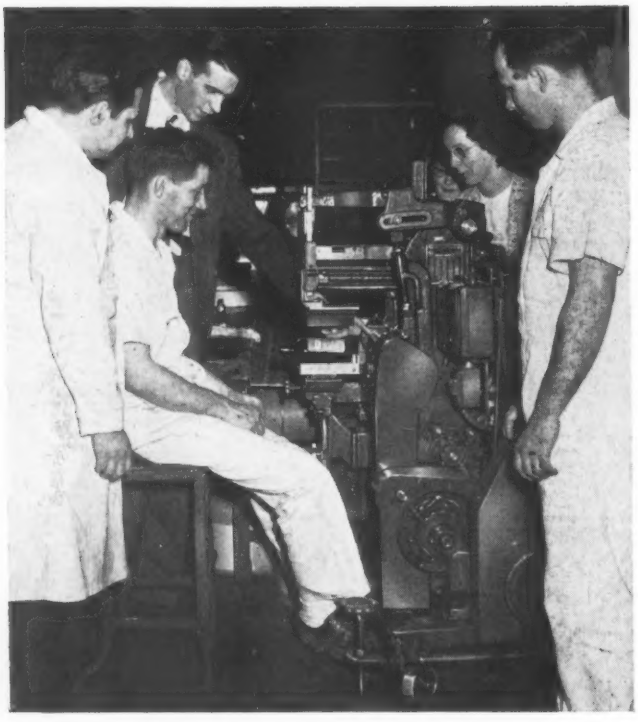
Experience in labeling courses indicates value of instruction properly presented by the packaging materials supplier. By JOHN C. CLAY*



PARKE, DAVIS officials discuss labeling problems with adhesive engineers prior to the organization of the instruction course they contemplate.



CLASSROOM for preliminary blackboard discussion may be set up in board room or lunch room, as demonstrated here at E. R. Squibb & Sons. Many employers who give these courses serve a buffet supper between lectures.



PERSONAL CONTACT by the supplier with small groups of machine operators is the best way to bring home specific points following "classroom" discussion. These Eli Lilly employees are being reminded that "glue should be used as straight as possible and spread as thinly as possible."

necessary. Glue rollers, for example, must be perfectly cylindrical, with no nicks or grooves, to obtain accurate glue film regulation. The rollers must be leveled and adjusted. Then the glue pot is filled with glue.

This method, instructors explain, assures proper film. Worn parts should be detected early, reported and sent back for replacements.

Actual demonstration of correct handling and checking of parts, as well as thorough cleanliness of parts, emphasizes the value of scheduled care of machines for smooth operating efficiency.

The second session of the training course is devoted to the nature of animal, vegetable and resin glues—how they are developed, manufactured, assayed during processing, packaged and identified. Further discussion is presented on the various tests glues must pass for age, viscosity, tackiness, crystallization and moisture content.

Age of the adhesive, instructors point out, is important and can affect its performance in the machine. Glue shipments should be used in the order in which they are received, with new supplies placed in the background so that the oldest batches on stock shelves will be consumed first.

Points on the proper care for storing of adhesives are emphasized, such as storage at moderate temperatures both winter and summer and keeping glue containers covered when not in use.

To increase employee interest, many concerns schedule a break at this point for the serving of refreshments. In fact it is becoming quite common to schedule the sessions so the first two hours are presented during the late afternoon, followed by a buffet supper. The remaining two sessions are then presented during the early evening hours.

The third session is really the "meat" of the course. Many years of combined experience have been drawn upon to present step by step the various common types of difficulties, the causes and the means to overcome each type of problem. Obviously the instructor must detail the conditions involved. Unless the operator understands the variables affecting the results (such as temperature, humidity, glue dilution, film thickness, etc.) as well as the design and specification of containers, stocks, labels and the use of adhesives, a packaging course cannot achieve its purpose.

Specific recommendations then follow on the dilution and mixing of glues, with the warning that maximum dilution should not run over 15% water by weight and that straight water should not be added to the machine glue pots.

The instructors also demonstrate the necessity for thorough mixing, an important point that is frequently overlooked. They show how proper dilution and the

thickness of film applied can control setting-up ability of the glue. The film, for example, should never be over $^{3}/_{1,000}$-in. thick. Further, they outline the steps to take to avoid crusting that would otherwise ruin the adhesive and possibly damage the machine.

Operators are constantly reminded of the maxim that "glue should be used as straight as possible and spread as thinly as possible"—a rule they are urged to follow without fail.

Following careful review and familiarization, each major type of difficulty is carefully analyzed with accompanying demonstrations of good as well as bad examples.

Concluding session of the 4-hr. course reviews the instruction and demonstrations already presented. The class is then thrown open for a discussion of problems concerning paper stocks and inks and the importance of design and selection of bottles, cans and other types of containers.

Before classes are dismissed, incidentally, operators are told specifically of the results expected in improved packaging techniques and in reduction of rejects.

Companies which contemplate establishing a labeling course for their employees are encouraged to have present at the classes representatives of labeling-machine manufacturers to give a broad, practical approach to the matter, as well as persons thoroughly experienced with glues.

The course suggested by National Adhesives has been prepared in detail by the firm's sales promotion department to simplify organization and arrangements for the classes.

Suitable handbooks are offered as valuable aids. In effect, the course represents consolidation of the extensive work on packaging problems done by National in the past and the experience obtained in conjunction with the many presentations already made. Qualified men throughout the country will cooperate in presenting labeling courses for larger concerns, or arrange for group courses to be given for smaller companies, where such a combination may prove to be a more practical method of handling the course.

SEWING MACHINE CLINIC IN A BAG PLANT

Bemis Bro. Bag Co. has established a "Sewing Machine Clinic" to assist plant managers in keeping bag-sewing equipment humming along at top efficiency. Two sewing-machine specialists with a specially mounted bag-sewing head and other equipment now move from city to city inviting representatives from plants in that area to attend the demonstrations and discussions. The demonstrations include the complete dismantling and re-assembling of a sewing head and instructions on the handling of common problems encountered in sewing-machine operation.

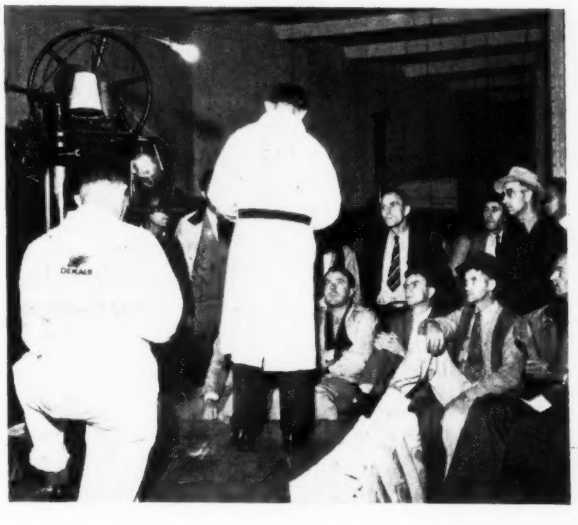
The clinics are informally conducted. During question and answer periods the participants have a chance to solve their various individual problems or to go more deeply into phases of the subject which are of particular interest or concern to them.

For several years Bemis Bro. Bag Co., which manufactures bag-closing threads and twines as well as bags, has had experts traveling about the country giving on-the-spot help and advice in customer plants. This service helped many plant managers and foremen over bad spots, showed them improved operating practices and how best to maintain bag-closing machines in tip-top condition. Bemis experts found they had more than they could handle; that the plant-to-plant calls could not reach everyone who needed help on bag-closing sewing-machine maintenance.

The Sewing Machine Clinics are not intended to replace the Bemis experts' personal assistance at factories, but to supplement it.

After having attending a Bemis clinic, customer plant personnel are usually able to avoid production losses by their knowledge of how to handle sewing-machine difficulties and problems that arise and which otherwise would mean the calling in of outside aid.

TWO SPECIALISTS conducting sewing machine clinic before employee group at Bemis Bro. Bag Co.



DISPLAY IMPACT achieved by supplementing colorful wrap-around label with circular top-of-can label (also acetate laminated) is apparent in this close-up contrasting new packages with former run-of-the-mill label in background. Every device of salesmanship, including guarantee, is incorporated in labeling to attract the shopper.

CARP WITH CLASS

Lakefish Canning Co. fights sales resistance to lowly but nutritious fish with acetate-laminated label and double-money-back guarantee

Canned freshwater flaked carp was one of the most promising new fishery products to evolve from research work conducted during the war. On the basis of exhaustive U. S. Army tests on the nutritive value, appetite appeal and cost of this product, the Lakefish Canning Co., Mankato, Minn., was organized and developed a process of canning the fish on an Army contract. After the war the company continued canning this item for the civilian market, building an ultramodern plant with greatly increased production facilities.

In offering the product to the civilian trade, the company soon found that the popular prejudice against carp, even though it lacked reasonable foundation, constituted a serious sales problem. Despite its economy, excellent flavor and good nutritive qualities, the product moved sluggishly off retail counters. Vigorous, constructive action was needed—and the promotional budget was limited.

Called in to vitalize the merchandising and distribution of the product, a Chicago food-marketing consultant decided that it was first necessary to create a highly distinctive label which would build increased consumer interest and confidence in the product and stimulate interest in selecting it in preference to other canned fish items. He reasoned that if the package could accomplish the primary objective of encouraging the consumer to try the product, its inherent quality would insure repeat sales.

The design objective, then, was twofold:

1. To cause the shopping housewife to pick up the can and read the label.

2. To persuade her, through its unique packaging approach and conviction of quality, to try the product.

Since carp are readily available throughout the year, Lakefish Canning Co. has been operating on a year-around basis. The Conservation Department of the State of Minnesota cooperates with the company by supplying it with fish. Carp are seined periodically from Minnesota lakes so they will not deplete the natural food supply and endanger the game fish for which the state's waters are noted. Brought to the Mankato plant alive, they are processed and canned immediately.

Bulletins of the U. S. Fish and Wildlife Service emphasize the fine flavor of this lean-meated, firm-fleshed fish, which has been regarded as a delicacy in Europe for many years. The exceptional cleanliness of the carp and its freedom from parasites are said to result from its essentially vegetarian eating habits. The species is also quite prolific, the female carp having as many as 10 million eggs per season.

In Minnesota alone there are 4,500 lakes heavily populated with carp, so that a limitless supply of raw material appears assured. This is particularly significant in view of the steadily diminishing supply of tuna, salmon and sardines—the most popular varieties of canned fish. The salmon catch along the Alaska coast has been dropping off annually, while each year the tuna boats must go farther to sea in quest of this favorite fish.

The original label used on "Minnesota Lakefish," as the product is called, was executed in pale colors and left much to be desired in shelf and appetite appeal. Like so many of the current labels for canned fish, this label had no particular distinction or snap which would motivate the prospective buyer to pick up the product and try it. It also suffered from the handicap of small size, a common problem with the flat tins used for this type of product.

The new wrap-around label for the $6^1/_2$-oz. canister employs a distinctive modern motif featuring 10 fish silhouetted against a strongly contrasting air-brushed background. Uncluttered by illustrations, the front panel employs bold capital lettering for immediate product recognition. Silver metallic ink, American vermilion red and ultra-marine blue are the dominant colors used on the label, with black as the final accent color.

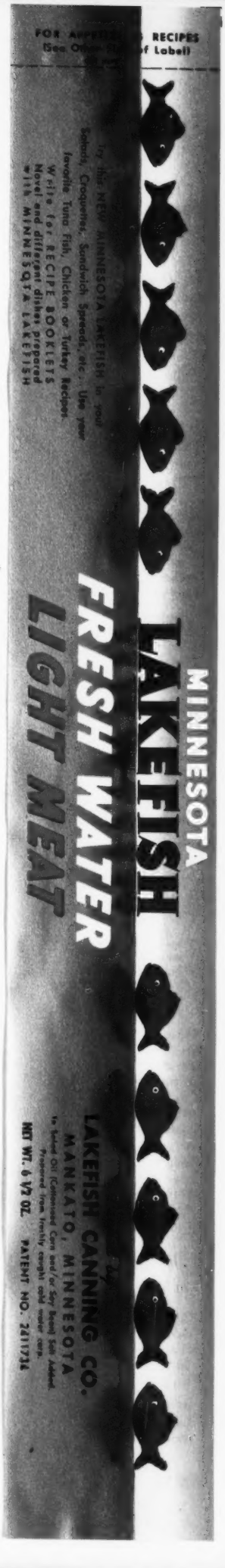
Printed on 60-lb. label stock, enameled both sides, it gains much added eye appeal through the use of a cellulose acetate surface lamination which also protects it against soilage. Identification of the product as carp and information on other ingredients appear in small type beneath the company name, to the right of the principal face of the label. The reverse side of the spot-sealed label lists three tested recipes and carries additional serving suggestions for the product.

Of special interest from the merchandising angle is the supplementary top-of-the-can label, printed in red, silver and black, offering the customer double her money back if she is not pleased with the product. This label, which recommends the food for use in salads, croquettes and sandwich spreads, also includes a large circular pricing path. The extra label greatly increases the available display area of the container, an important consideration on a can whose normal visual area on the shelf is quite small. This label also carries the clear acetate lamination.

Over and above its mere display value, it is believed that the top label will do much to build consumer interest and confidence in the product. Copy informs the buyer that unless she is "absolutely satisfied" with Minnesota Lakefish, she may return the label and empty can, along with the name and address of the store from which it was purchased, and receive a refund of double the purchase price.

Since only very limited funds are immediately available for national advertising and promotion of the product, the new label constitutes the major weapon in the attempt to win increased consumer acceptance. Although there has not yet been sufficient time to measure the full impact of the new label on sales results, the initial public reaction is reported to have been favorable. The product is merchandised through brokers to chains and distributors.

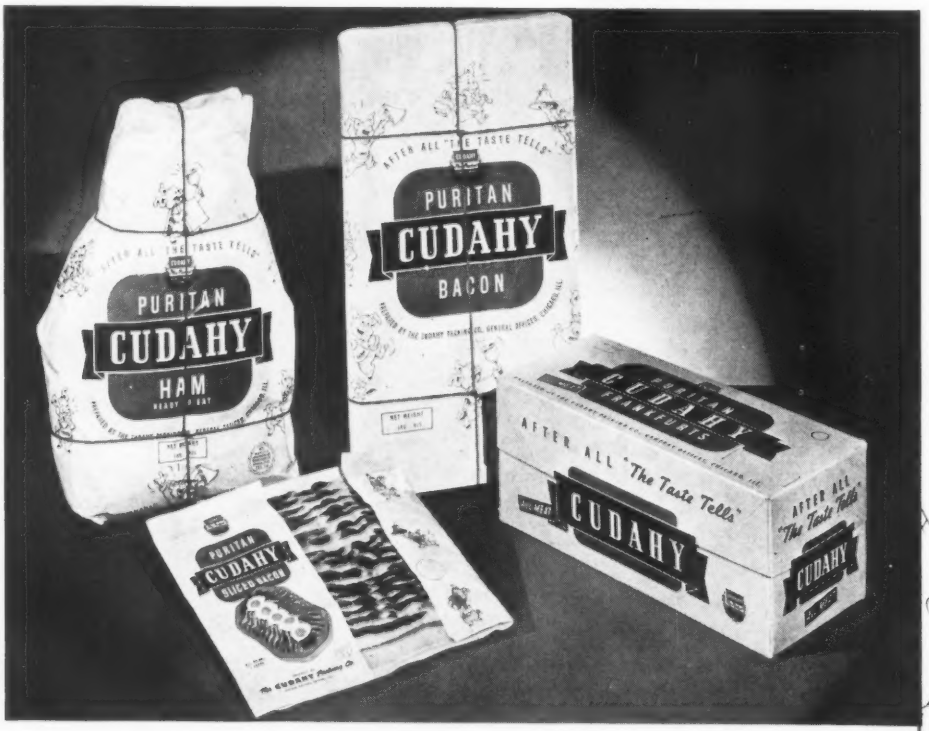
CREDITS: *Marketing consultation, Bob White Organization, Chicago. Label design, Norbert Schwarz, Chicago. Labels, Jackson Press, Inc., Chicago. "Lamcote" acetate lamination, Arvey Corp., Chicago. Cans, Continental Can Co., New York.*



LIFT THE LABEL and read the tempting recipes on reverse side, thus ingeniously incorporated on a small label. Wrap-around is merely spot-glued at one point; cutting on dotted line brings the recipes into view, as shown in photo. Note how acetate surface, bright colors and smart design are combined to create an impression of high quality. LABELS, COURTESY JACKSON PRESS, INC.

CUDAHY'S CURLY

A precocious advertising cartoon character moves onto the package in a redesign program that adds strength to company identification



1. NEW DESIGN retains Cudahy's red-white-blue color scheme, but greatly strengthens company name against the rounded rectangular panel that is readily adaptable to many types of packages and labels. By U. S. rules, Porky the Pig can appear only on pork products, including ham, bacon and a variety of sausage products.

The introduction of a spritely trade character named Curly, as well as increased emphasis on company identification, feature the new wrapper and package design program of The Cudahy Packing Co., Chicago. However, the basic red-white-and-blue color combination which has long been associated with Cudahy meat products is being retained.

The items affected by this packaging program are their Puritan meats, including ham, slab and sliced bacon, and a variety of sausage products. Cudahy Sunlight dairy and poultry products will also have the new design, but will employ one other basic color in addition to the usual red, white and blue.

On the new Cudahy meat labels, emphasis is placed on the Cudahy name by using larger and bolder lettering. The word Cudahy appears in white on an attractive blue ribbon which is superimposed on a red, rectangular background. The red, white and blue "Plus Products" seal, Cudahy's symbol of quality, is fitted prominently into the top of the red background.

Cudahy's canned meat items are identified by equal horizontal ribbons of red, white and blue, with the name Cudahy in white caps on the red ribbon. Cudahy Sunlight products, which include butter, eggs, poultry and cheese, have labels and wrappings which are similarly designed except that the over-all background is yellow. The company slogan, "After all... 'the taste tells,'" is incorporated into many of the labels and wrappers.

An interesting and colorful addition to the Cudahy wrappers is Curly, a precocious little pig. He has previously appeared in Cudahy advertising and now makes his debut on the Puritan packages. Curly, who is expertly drawn by a Hollywood artist, lends himself

to an infinite number of poses. You will find him in the role of cheer leader, radio announcer, card player and "sandwich sign" man with clanging dinner bell.

Curly breaks down consumer resistance, gives helpful hints on product use and his presence on the package provides pleasant association with the product, company officials feel. Curly is destined to play a large part in Cudahy's packaging program. Because of federal labeling regulations, however, he can be used only on pure pork products.

These Cudahy label and package innovations are being made under the supervision and direction of William Weber. Mr. Weber says that his over-all plan is to make each Cudahy label and wrapper attractive and distinctive in itself; to make all Cudahy products readily identifiable through emphasis on the company name and the use of standard colors and to insure recognition of the Plus Product seal, the Cudahy slogan and Curly, their trade character.

Mr. Weber stated that the adaptability of the rectangular red background panel to changing package proportions was a primary reason for its use. This flexibility may be observed by comparing the Cudahy ham label with the carton for frankfurts (Fig. 1). In the former, the shape of the product requires that this panel be approximately square, whereas on the frankfurts package it becomes an elongated rectangle. In both cases, however, the fundamental design elements are maintained. Had a circular or oval background been used, the difficulty of utilizing it effectively on both these packages would have presented a real problem.

On the Sunlight egg carton, the basic package design is repeated on each half of the package so that complete identity may be maintained even after half the carton has been torn off along the center score line and discarded. In order to meet geographical preferences, Sunlight butter is offered in both the standard square type carton and the Western style flat package.

CREDITS: *Basic package and label design, Karl Peter Koch, Chicago. Ham and bacon wraps, Kalamazoo Vegetable Parchment Co., Kalamazoo, Mich. Lard and butter cartons and self-service frankfurt package tray, Sutherland Paper Co., Kalamazoo, Mich. Frozen poultry carton, Waldorf Paper Products Co., St. Paul, Minn. Frankfurt carton, Morris Paper Mills, Chicago. Cellophane wrap for self-service frankfurt package, Traver Corp., Chicago. Process cheese carton, The Ohio Boxboard Co., Rittman, Ohio. Egg carton, Self-Locking Carton Co. (Div., Shellmar Products Corp.), Chicago.*

2. SUNLIGHT LINE of dairy and poultry products uses the same basic design as the meat products. However, in addition to the red, white and blue, a fourth color is added for quick identity.

DESIGN

NEW DISPENSER

The snap-on metal dispensing cap for Dif hand cleaner slips over the filling opening easily, but once seated on the metal edge, locks into place and can't be pulled off by the user. Its one-hole sprinkler opening assures the right amount of cleaner being shaken out without any waste. Specially designed, the swivel top is featured in the new 8-oz. metal-end fibre can illustrated at left. Display area on the new can has been increased by a change from round to elliptical shape. The stylized decoration of water trickling from tap to hands on the old package (right) is dropped, focusing all attention on name and slogan. Cap and top are red to match label.

CREDIT: *Label design and lithography, Rode & Brand, Inc., New York. Cap and container, The Canister Co., Inc., Phillipsburg, N. J.*

CRISCO ADOPTS FULL-COLOR ILLUSTRATIONS

The Crisco package has long had high rating as a package that women like and was among those receiving the most favorable comments in the Grocery Manufacturer's 1946 Market Basket Quiz for its recognition value, neat appearance, clear directions and good recipes. Now Procter & Gamble has gone a step further and added appetite appeal with full-color illustrations of tempting dishes and step-by-step directions for their preparation. The package marks the first complete redesign since the product was introduced in 1909, preserves the familiar starred blue background, but simplifies the product name, now printed in red for greater emphasis when displayed in self-service markets.

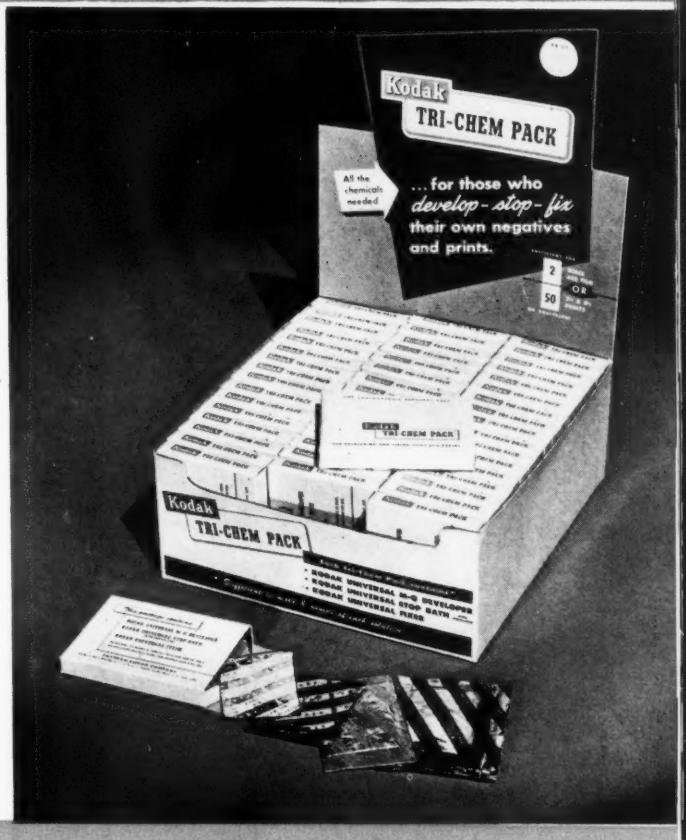
CREDITS: *Label, McDonald Printing Co., Cincinnati.*

HISTORIES

UNIT-PACKED CHEMICALS

Convenient new unit packaging of Eastman Kodak's Tri-Chem Pack assures fresh chemicals in small amounts for amateur photographers who only occasionally develop their negatives. Items do not deteriorate in heat-sealed unit packets of aluminum foil laminated with printed cellulose ester. Different colored packets have chemical name in all-over reverse printing for quick identity. Cost is kept low as the packets are made and filled on high-speed machines. Individual cartons are printed in the familiar Kodak colors. Display holds 50 packs.

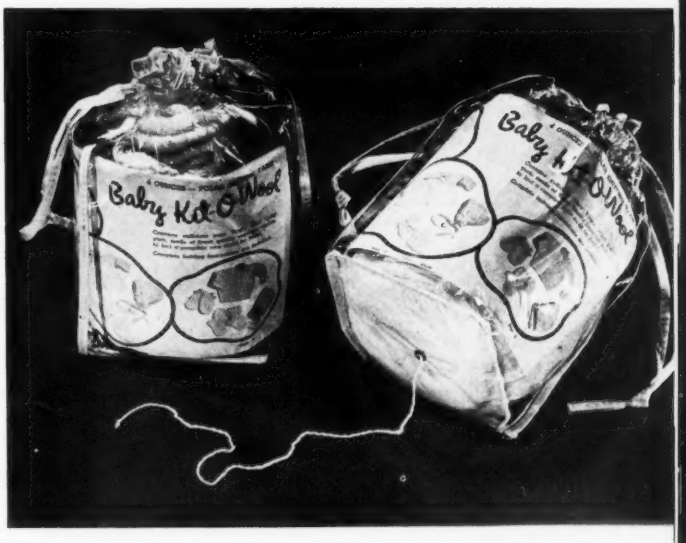
CREDITS: *Laminated material by The Dobeckmun Co., Cleveland, using aluminum foil by Aluminum Co. of America, Pittsburgh, and cellulose film by Eastman Kodak Co. Filling and fabricating machines, Pneumatic Scale Corp., Ltd., N. Quincy, Mass., and Stokes & Smith Co., Philadelphia.*



VINYL PACKAGE IS RE-USE KNITTING BAG

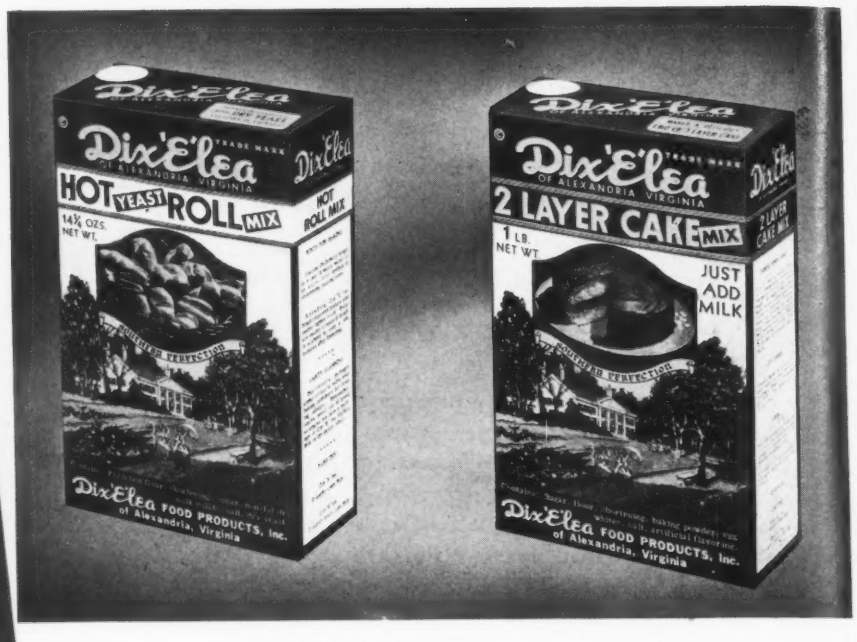
There's no chance for the large 4-oz. ball of yarn to roll away and get dirty when a traveling knitter uses Baby Kit-O-Wool, made by Wool Novelty Co., New York. A drawstring bag made of vinyl film serves as package and knitting bag and keeps the delicate-colored yarn clean while being used. Yarn is pulled from the protective bag through a metal eyelet in the bottom. Packaging the usually hard-to-sell 4-oz. size of yarn because of its unwieldiness has proved a sales getter. Women are quick to see the convenience of the kit, according to the company. Instructions are given in the booklet, whose cover serves as the label.

CREDITS: *Bag fabricated by Comet Envelope & Paper Co., Inc., New York, of Bakelite Corp. Vinylite.*



SOUTHERN COOKING

That's the package appeal of new Dix'E'lea mixes, which win distinction by bucking the modern design trend in their field.



FIVE-COLOR fine-screen lithography on boxboard produces striking realism for product vignettes. Design was deliberately chosen for utmost contrast with all competitors in the field.

Sometimes a trend in package design in a particular product field becomes so universally followed that competitive packages begin to look very much alike when they get together on a shelf.

Lyndal Pankey decided this was true of the cake mix field. It seemed to him that all of the brands had been so busy playing follow-the-leader in a particular poster-like, modern design treatment that each had lost its individuality. So when he launched his Dix'E'lea Food Products, Inc., in Alexandria, Va., a few months ago and prepared to market a cake mix and a hot roll mix, he seized the opportunity to be different.

The resulting folding-box packages not only are beautiful examples of the engraver's and printer's arts, but they neatly fulfill two prime objectives of his marketing program. The pictorial front panel on both is an ultra-fine-screen reproduction of an original oil painting of an old Southern mansion and grounds—a nostalgic landscape complete with old-fashioned ladies with parasol.

This pastoral scene gave him the greatest possible contrast with the dynamic modern packages of his competitors and at the same time heightened the "old Southern cooking" atmosphere that he was trying to build around his products. The coined name "Dix'E'lea" was carefully selected to further the Southern idea.

Full-color product picture

At the same time, Mr. Pankey made the proper concession to modern merchandising principles by superimposing luscious full-color vignettes of the end product in small, bold panels just above the Southern landscape. The "Hot Yeast Roll Mix" package shows a basket of tempting golden rolls, while the "2-Layer Cake Mix" shows a sliced chocolate-covered white layer cake on a plate.

Fine-screen reproduction gives these vignettes unusual effectiveness and unmistakable product identity. The two different products are further distinguishable by the color of the product-name band, which is red with white lettering for the cake mix and white with blue lettering for the roll mix.

The pictorial portion of the package is lithographed in five colors. The remainder of the surface is uniformly dark blue and white—except, of course, for the product-name band on the cake mix. Top and bottom trade-name panels present the logotype in bold white reverse against the dark blue background, while on the side and back panels directions and recipes are printed in dark blue on white. Tops of both packages have a large blank white circle for the convenience of the retailer in marking prices.

Brilliance of color and perfect gradation of tone are essential to the printing of life-like reproductions of finished food products and the special lithographic process by which these cartons are produced accomplishes these aims admirably by using very fine halftone screens—as fine as 200-line. This fine-screen process has been made effective, as in this case, even on ordinary folding boxboard. The Dix'E'lea cartons are given extra shelf life and added luster by the application of a final varnish coating.

Coming from a family identified with the baking business for more than half a century, Mr. Pankey has devoted his entire career to the development of packaged prepared mixes. Prior to establishing his own company

PACKAGING STARTS with filling of moistureproof laminated glassine bags from an accurate volumetric filler. Occasional bags are check weighed. This filler handles as many as 45 packages per minute at maximum accuracy.

CARTON SEALER glues and seals top and bottom box flaps after inner bag has been heat sealed and inserted in box by hand. Special skip-gap prevents gluing of bag to bottom of carton. Capacity is 80 bags per minute.

he was chief of product development for the Duff's Baking Division of American Home Foods, Inc., where he developed the first prepared hot roll mix to be placed on the market. Previously he was with the Monsanto Chemical Co.'s Phosphate Division, where his research on leavening agents and flours for the milling industry set the stage for his later development of packaged mixes.

As might be expected, therefore, the Dix'E'lea packaging line, made up entirely of new equipment, represents the experience of a lifetime in the handling of this type of product. All of the machines are standard models, but with the latest time-saving features and attachments. Six girls handle the entire packaging operation, from filling to case sealing.

216,000 packages a week

The big mixer will deliver about 3,000 lbs. of product per hour and the entire line can turn out about 18,000 doz. cartons per week. There is a special vertical elevator which will both elevate the raw materials into the mixer and carry the finished mix into the packaging machinery. All mixes are automatically processed through an entoleter as a precaution for the control of possible insect infestation.

The volumetric filling machine delivers the mix into moistureproof laminated glassine bags, which are then sent on a conveyor belt past a check-weighing station for spot checking. This type of filler will handle as many as 45 packages per minute. A custom-built hopper has been erected above the filler, with automatic electric devices to keep the hopper always at a uniform level and also to keep the mix feeding uniformly into the

COMPRESSION BELT discharges finished packages at casing station with flaps firmly sealed. Each shipping carton holds 24 packages.

SIDE AND REAR panels carry well-arranged directions and recipes in dark blue on white.

Dix'E'lea
ADD MILK—MIX & BAKE
NOW! OLD FASHIONED SOUTHERN PERFECTION WITH THIS QUICK MODERN 2 LAYER CAKE MIX
WHITE LAYER CAKE
Dix'E'lea
DRY YEAST
'TRY THESE TEMPTING ROLLS

hopper, thus insuring maximum accuracy of delivery by the filling machine.

The long conveying table, which carries the bags from the filling station past the check weigher to the carton-sealing machine, allows ample working area to heat seal the bags, place them in the cartons and feed the cartons to the final sealing machine. This conveying table was custom built for the plant's special requirements, taking into consideration the positioning of the packaging machines and special details of the operation.

Water-vapor and greaseproof protection, essential to this type of product, are provided by the laminated two-ply glassine bag, which uses a special laminate and a special glassine made to the bag company's specifications. The bag has an effective heat-seal coating for tight top and bottom closures.

The carton-sealing machine, which glues and seals both tops and bottoms in one operation, is a standard machine with a wide range of size adaptability and a capacity of 80 packages per minute. It has a special skip-gap to prevent gluing of the inner bag to the bottom of the carton. The speed of the machine and the length of the off-take compression belt are carefully gauged to permit setting of the adhesive before the cartons drop off the end, ready for the shipping case.

Twenty-four packages of either the cake or roll mix are packed for shipment in conventional corrugated shipping containers.

Many of the packaging operations presently being done by hand will, of course, be mechanized when volume of production warrants, but for a new plant on a comparatively small scale this installation is believed to be a model of efficiency.

CREDITS: *Folding cartons printed by "Fidelitone" process by Lord Baltimore Press, Baltimore, Md. Laminated glassine bags, "Lamofilm," by Benj. C. Betner Co., Devon, Pa. Filling machine, Model U2 auger, Triangle Package Machinery Co., Chicago. Scale, Exact Weight Scale Co., Columbus, Ohio. Carton sealer, "Ceco," Container Equipment Corp., Newark, N. J. Shipping containers, Kieckhefer Container Co., Camden, N. J.*

SCOTCH PLAIDS FOR THRIFTIMIX

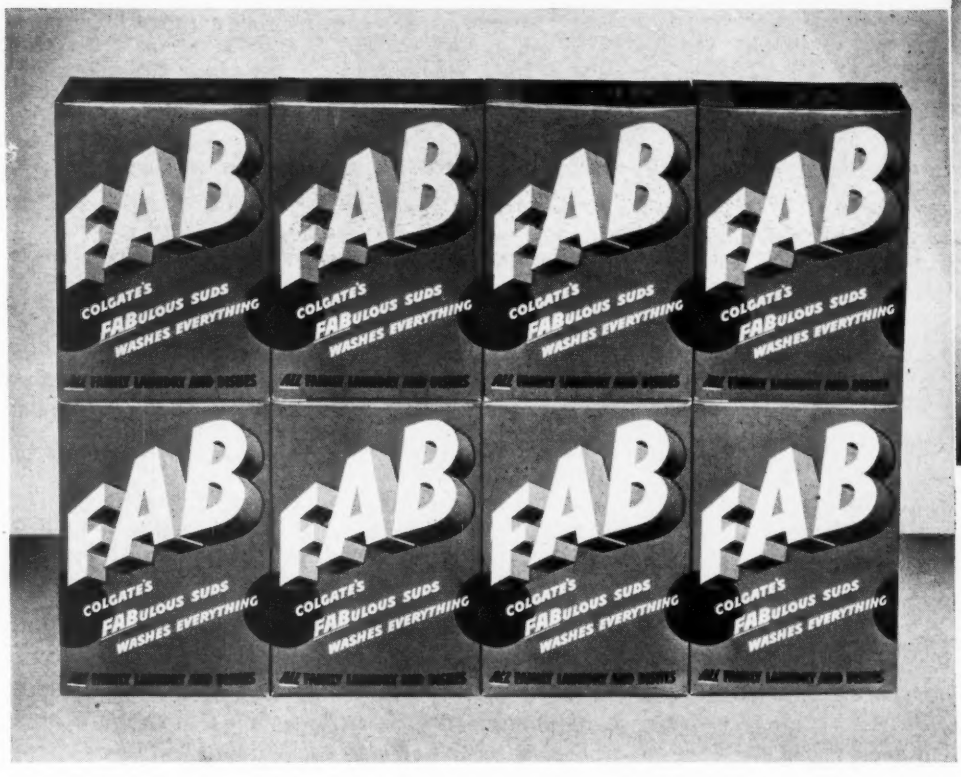
After 28 years of quality leadership in Western markets, Thriftimix Corp., Los Angeles, is streamlining its package to capture its due share of the prepared cake and cookie mix market. Since 1920 the company has been active in working out formulas and baking techniques for doughnut and waffle mixes. Supplying the U. S. Armed Forces during the war kept Thriftimix from holding its own in the consumer market, where it introduced a full line of cake and cookie mixes in 1936.

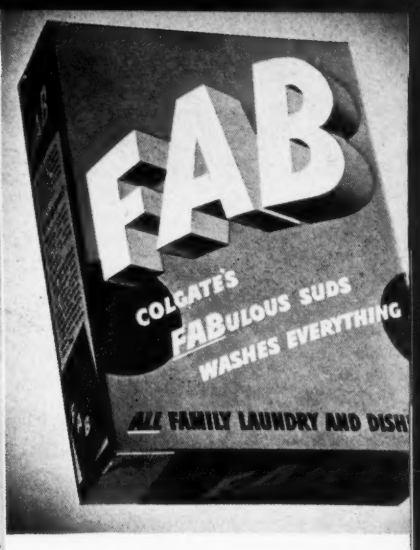
Spearheading the campaign is the brilliant new package, combining a printed cellophane overwrap and a rectangular paperboard carton. Eight different varieties of mix (golden, white, spice and chocolate cake) have the same basic package design. Nearly three-fourths of the package's over-wrap is imprinted with a scotch plaid design. The top one-third carries the distinctive Thriftimix signature.

Each of the varieties is distinguished by different combinations of colors in the plaid. A box patch superimposed on the plaid designates the type of mix and its ingredients. Reverse printing with glossy inks on the cellophane achieves maximum color brilliance.

Test marketing on the West Coast with the packages put in mass displays is reported to have attracted nearly 100% notice of store traffic.

CREDIT: *Overwrap, Milprint, Inc., Milwaukee.*





THREE-INCH HIGH white block letters outlined in vermillion, halftone shaded with black against bright blue-green background, bring new excitement to the supermarket. Logotype is repeated on both carton ends.

MAGNETIC CARTONS

Segmented bull's eye, huge three-dimensional block letters and new color combinations make Colgate Fab package a powerful eye catcher

So competitive are the new detergents and soap powders on the market today that it takes real flag waving to design a package that will stand out among the others on the store shelf.

Colgate-Palmolive-Peet Co.'s new carton for Fab, promoted as the "*Fab*ulous" new washing discovery, is designed to be that kind of a package. The company attributes a large part of the immediate success of this new product, introduced in Chicago test markets in April, to the powerful color and optical design elements that give the package magnetic appeal in mass display.

According to William Troy, head of Colgate's design division, who is responsible for creating the package, the Fab carton uses, for the first time in the soapless powder field, 3-in. high block letters in three-dimensional effect arranged diagonally to give movement. Another innovation is the use of black disk segments which become single bull's eyes when the cartons are lined up horizontally—tremendous eye catchers when the cartons are stacked.

Color treatment, too, is in contrast to other detergents and powdered soap packages. A cool blue-green background differentiates this package from all its competitors and gives strong emphasis to the product name in white, but outlined in vermillion red with black halftone shading on the underside. The three lines of copy promoting product usage below product name are printed in reverse white.

New gloss inks give the effect of a lacquered surface to the packages and eliminate the need of spot varnishing. Absence of the gloss inks on the white areas accent the whiteness of board, thereby enhancing the color contrast.

The logotype is repeated in vermillion and white on both carton ends. Side panels are devoted to quick-paced copy descriptions of product qualities. Back panel has line illustrations and boxed copy describing uses. A serrated circular red patch boldly tells the shopper that the product is "up to 50% more economical than soap."

CREDITS: *Cartons, The Ohio Boxboard Co., Rittman, Ohio, and Gardner-Richardson Co., Middletown, Ohio. Gloss inks, International Printing Ink, Div. of Interchemical Corp., New York.*

CUBAN REVOLUTION

Enterprising roaster conquers native prejudice and puts across idea of packaged ground coffee, boosting his sales to the largest on the island

A packaging revolution occurred in Cuba at the beginning of the war when La Flor de Tibes, S. A., in Havana introduced the first packaged ground coffee in that country under the brand name of Pilon. The idea, undertaken with great trepidation because Cubans had never bought ground coffee in packages, has made La Flor de Tibes the largest coffee roasting and packing firm in Cuba. It has also caused a profound change in the coffee-buying habits of many Cubans.

To understand the significance of packaging coffee for Cuban use—a taken-for-granted fact to North Americans—it must be pointed out that in many Latin American countries coffee is customarily sold only in bulk in the roasted bean, to be ground at home. Perhaps such an idea is 25 years behind the times to us who are accustomed to buying almost all coffee ground and in packages, but Cubans and other Latin Americans claim the flavor and aroma of coffee are lost soon after the coffee has been ground. Many coffee lovers will defend this argument ardently, claiming that the bean is nature's own protective package. Even in the United States you are familiar with the A & P stores who have long advertised that their private brands of coffee are packed in the roasted beans, ground to the customer's order in the store.

It was only the choice of going out of business or taking a completely new merchandising attitude toward coffee that brought about this coffee packaging innovation by La Flor de Tibes, according to M. Bascuas, vice president and managing director of the company. Three years of severe competition among the Cuban coffee roasters during the 30s had dealt a crippling blow to the company, which had built a substantial wholesale business since its founding in 1909.

Besides taking into consideration the strong initial customer prejudice against packaged ground coffee, there was another consideration involved in making the decision: the investment in packaging machinery would be considerable. This added expense—when bulk coffee trading could be done with almost no investment at all—was an important factor under the circumstances. The decision made, kraft bags were used at first to package the coffee in half-pound and one-pound sizes.

The gamble has paid off, but it took two years of hard sales promotion work and aggressive advertising before the packaged sales were large enough to meet overhead expenses.

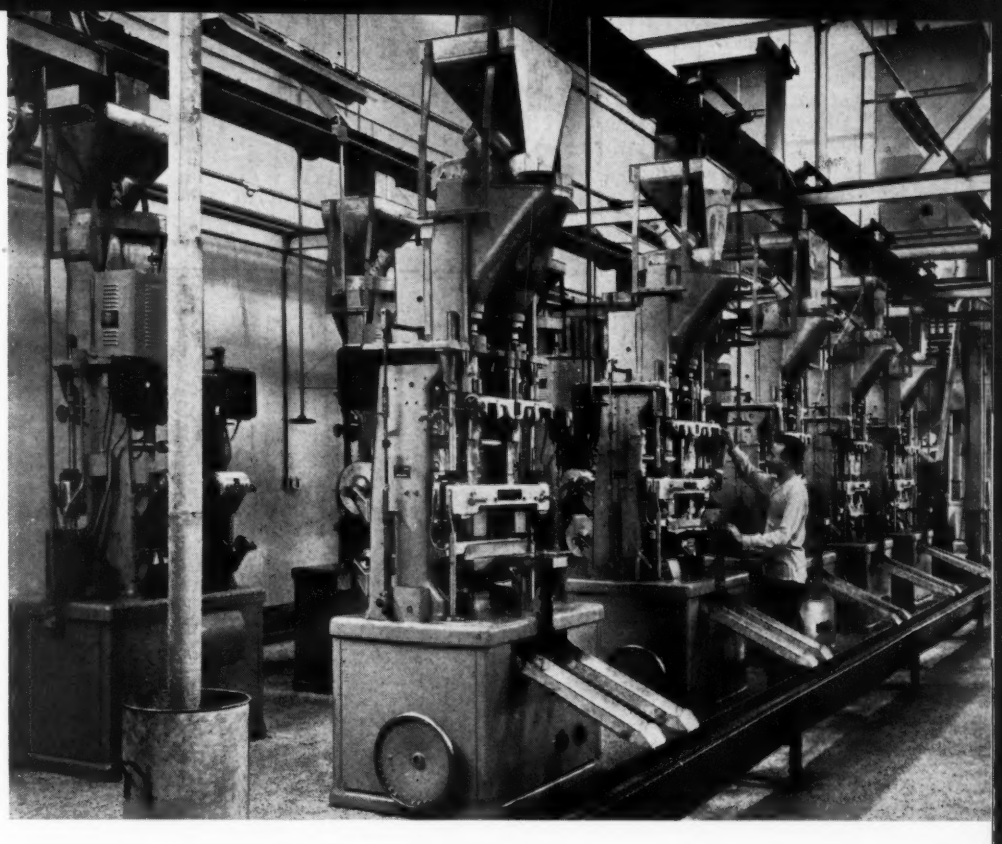
The kraft paper bags were soon found to be unsuitable, both in size and in merchandising. A change to cellophane packaging was made and a small-sized package of 40 gm. (1.41 oz.) was brought out. This small-sized package paved the way to success.

Retailing for 5 cents, the package contains sufficient coffee for four cups. Cuban customers like both the price and the size. Usually no coffee is left over for later use after the bag is first opened, so it overcomes the fear that the full bouquet and flavor of ground coffee will be lost. The cellophane, printed in three colors—red, white and black—has much more sales appeal. The bags offer sufficient protection for 20 days, which is ample time for distribution in Cuba.

As a result of the initial success of the small 5-cent package (now accounting for 60% of total sales), the company decided to package the other two sizes—170 gm. (5.99 oz.) retailing for 20 cents and 340 gm. (11.99 oz.)for 40 cents—in cellophane bags. In one month after the change-over, sales increased 100% according to Mr. Bascuas.

A vacuum-packed 1-lb. can which sells for 80 cents is

TRANSPARENT BAGS, colorfully printed, and small sizes persuaded Cubans to try this radical new way of buying coffee. These 6- and 12-oz. cellophane bags are prefabricated, then filled; smaller 5-cent packet (not shown) is formed from roll cellophane and filled in one operation.



STAKE IN PACKAGING held by La Flor de Tibes is indicated by this battery of 10 American machines that automatically form and fill 5-cent packets at high speed. Small packet holds just enough coffee for a 4-cup pot and is Cuba's biggest seller.

available, but the higher price and continued sales resistance to the can has prevented it from winning any real sales volume.

By 1945, La Flor de Tibes had become the largest roaster and packing firm in Cuba. Plans were drawn up that year to build a new, completely modern plant as soon as the necessary equipment could be supplied. In September, 1947, the plant was completed and in operation. Present packs are running around 6,000,000 lbs. a year—$2,900,000 in sales. As soon as a second plant is finished in Camaguey, the production will go to 8,000,000 lbs. a year, Mr. Bascuas anticipates.

In the new plant a battery of 10 bag-making and filling machines turns out 300,000 of the 5-cent packages daily. Each machine is capable of automatically forming and filling 60 single-walled bags per minute. The printed cellophane roll stock is fed as a web around two tubes, the side seam sealed and the tubes filled by a rotary filling head. As the tubes are filled with the exact amount of coffee, a drawbar pulls them downward to meshed dies which, with a single heat-sealing operation, close the top of one bag and the bottom of the one following. As the draw bar completes its down stroke, the bag's transverse seal is sheared in the center and the filled bag is ejected.

The 20-cent and 40-cent bags are bought prefabricated and filled by using two automatic net-weighing machines.

Use of the 10 automatic packaging machines has made the smallest sized package the cheapest, considering both package and labor, according to Mr. Bascuas. Only two men are needed to tend the 10 machines. Four men are required for the handling of the two weighing machines' output, which is 30 bags per minute for each one. Two of the four men must see that the weighers are kept filled and the other two must heat seal the filled bags.

Bags of the Cuban green coffee beans are stored in a room adjacent to the roasting, grinding and packaging room. When they are brought into the processsing room, the bags are slit open and the green beans emptied into a cleaning machine. After cleaning, the beans are processed through two four-bag roasters. The beans are cooled and then given a fine grind—preferred by the Cubans—in four grinding mills. Ground coffee drops into hoppers on the top of the packaging machines from a series of pipes. From the packaging machines, the coffee-filled bags move along by conveyor to the casing room for packing in shipping cartons.

La Flor de Tibes has its own fleet of 26 trucks, each manned by one driver-salesman who makes two calls each week to retail groceries in the Province of Havana. Small-town grocers in the provinces of Pinar del Rio and Matanzas are serviced once a week. When the second new plant at Camaguey is completed, the service to these provinces will be increased and distribution to the provinces of Las Villas, Camaguey and Oriente will be set up. Sales are made on a cash basis only.

The company has paid particular attention to its sales promotion and advertising, as mentioned before. Largely an educational campaign to sell the idea of Pilon packaged ground coffee, all media—radio, magazine, bill-board and illuminated display signs—are used. Mr. Bascuas reports that $1\frac{1}{2}\%$ of sales is spent on advertising.

CREDITS: *Transwrap wrapping machines supplied by Transparent-Wrap Machine Corp., New York. Auto-Check net weighers, B. F. Gump Co., Chicago.*

MOISTURE-SET

DEMONSTRATION shows how steam sets new-type ink by precipitating the insoluble resins. Proof dries at once.

WAXED WRAPS such as those used for bread and butter offer an ideal application for moisture-set inks, which are odor free and do not impede heat sealing. Stock can be run through waxers two hours after it has been printed.

Drying inks by wetting them with water in the form of water-vapor or steam is now an every-day occurrence in many printing plants throughout the country. The secret lies in the comparatively new moisture-set inks which were announced just before World War II, but did not reach the full stage of development or use until the last few years. The story of these new inks is of great interest to the packaging field.

The principle behind moisture-set inks is entirely different from that employed for ordinary inks. They do not depend upon oxidation for drying and are made with special synthetic resins and practically odorless solvents which have high boiling points. The resins are soluble in the solvent, but insoluble in a mixture of the solvent and a sufficient quantity of moisture. Setting or drying of the ink therefore takes place by precipitation of the resins when moisture in any form is applied.

The idea of setting an ink by precipitation is not new, but the use of water to accomplish the setting is a radical departure from previous practice. Several years before World War II, this company developed wax-set inks which attained wide use in the printing of milk-bottle caps, paper milk containers, etc. Here the freshly printed inks are immediately immersed in melted paraffin which reacts with the solvents to set the inks almost instantly in practically the same manner as moisture-set inks are dried by moisture.

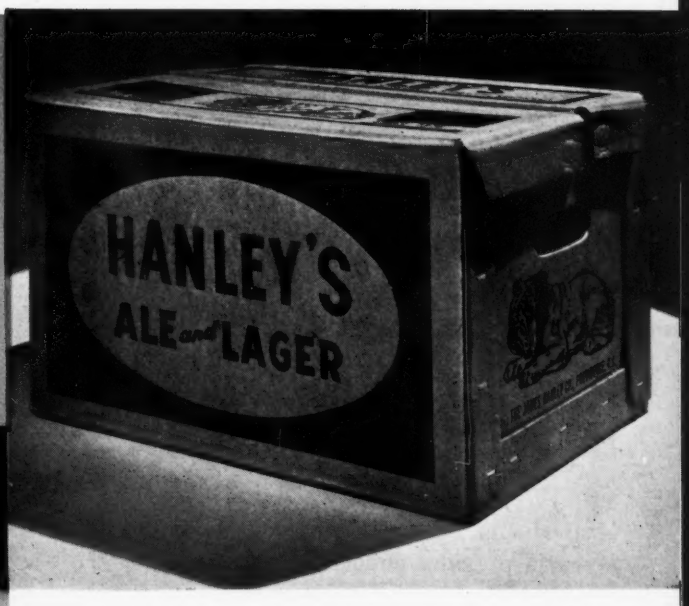
The practical application of moisture to the new inks as they are printed on paper or board by letterpress may be accomplished in several different ways. In one method, satisfactory results are obtained when a special steam unit is placed directly over the paper as it leaves the impression cylinder. Such a unit uses comparatively high pressure steam which releases the proper amount of vaporized moisture through many small openings (or a long, narrow slot) at just the right distance from the stock. Excessive condensation is controlled by various methods so that any water formed in or around the unit is trapped at several points and kept away from the paper. Properly designed steam units may be installed on either web-fed or sheet-fed presses. A fine mist of warm water may also be used under certain conditions and even fine particles of cold water will dry these inks, although it is not recommended. Simplest of all methods is that of using the natural moisture content of "green" stock to set the ink, as is done in the printing of warm, moist corrugated carton stock.

What are the advantages of a moisture-set ink over conventional inks? The answer is that there are many advantages to the new inks which vary in number in accordance with the stock and the purposes for which they are used. The principal advantages for food packaging are:

* International Printing Ink Division, Interchemical Corp., New York.

INKS

The new inks that are dried with water are odor free, heat sealing and rapid drying, and offer many advantages in the field of food packaging. By GEORGE WELP*



BRILLIANCE OF COLOR is one of the attributes of moisture-set inks, as demonstrated by printing job on this dark-toned heavy solid fibre box. The inks dry on the surface almost immediately.

NATURAL MOISTURE of corrugated is sufficient to set inks so fast that scoring, cutting, perforating can follow immediately after printing.

1. *Drying speed.* Up to 600 ft. per min. under proper conditions and rapidly enough to run through waxing machines within 2 hrs. after printing. Ordinary inks for the purpose take much longer; some take several days and frequently as much as two weeks.
2. *Lack of odor.* None at time of printing, nor does any odor develop after printing.
3. *Heat sealing.* Excellent heat-sealing qualities. Permits printing of design on portions of waxed wrapper to be heat sealed and gives easier handling on sealing machines.
4. *Printing.* Gives sharp, clean impressions with great brilliance of color.
5. *Range of color.* Now available in comparatively wide range of color. Pigments selected with great care to fit the special types of resins and solvents used.

Most important of these advantages to the food packager is no doubt the odor-free character of moisture-set inks. This freedom from odor is accomplished by using resins and solvents which are not subject to oxidation. Most conventional inks depend upon oxidation for all or a part of their drying and give off the usual odors associated with oxidation.

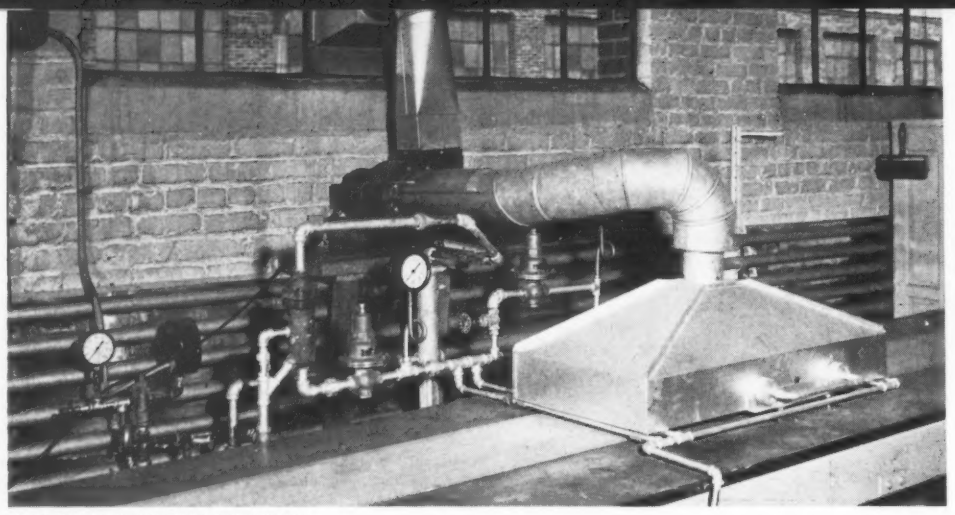
Heat-sealing qualities are probably next of importance to the food packaging field, since conventional inks resist the sealing of waxed stock by heat. Therefore, a wax wrapper to be printed with conventional inks is usually designed with heat-sealing portions free of printing. Furthermore, ordinary inks frequently cause trouble in handling by the sealing machines. Several users have actually claimed that their waxed paper sealed better when printed with moisture-set inks than when free of printing.

Another advantage of moisture-set inks is that they do not bleed in the wax even when they have been set by so called "back waxing" rather than by moisture previous to the final waxing. Also they do not release small particles to "float" in the paraffin and cause a spotted appearance in the finished stock.

Before the introduction of moisture-set inks, the printing of food packages and wrappers by letterpress was handicapped by the difficulty of reducing ink odors to a minimum and by the consequent drying problems. Obviously, since oxidation causes ink odors, heat units were not the complete answer to fast drying as they were in the case of publication printing. Other methods of printing met with some success and are still used for much package work, but were limited to certain types of printing by inflexible elements of their basic design.

Fortunately, moisture-set inks also have the advantage of working on practically any standard typographic press to which a steam or spray unit can be attached for setting of the inks. Although originally designed for semi-high-speed, web-fed presses (up to 600 ft. per min.), the new inks work equally well on sheet-fed presses. However, rollers made of (or faced with) rubber or synthetic rubber must be used and all trace of conventional inks should be removed from both press and printing plates. A perfect wash-up is essential.

The precipitation method of drying moisture-set inks



LABORATORY UNIT used for the testing of moisture-set inks is similar to the equipment used commercially in printing plants. The wet sheets travel on a moving belt under steam hood, at any desired speed, and emerge dry on the other side.

PHOTO COURTESY INTERNATIONAL PRINTING INK.

keeps the ink open on rapidly spinning rollers of a press and still provides almost instant drying on the stock. Despite this speed of drying, a new moisture-set ink permits presses to be "down" for plate or other changes as long as 1 hr. and sometimes longer without danger of ink drying hard on press rollers.

As indicated earlier, moisture-set inks are not compatible with conventional inks and differ radically in both formulation and printing characteristics. They trap beautifully over previously printed moisture-set inks, but cannot be used on the same job with ordinary inks. Special solvents and adjusting ingredients are also used for best results.

Perhaps the most interesting experience is that of a large New York plant which printed 45,000 corrugated containers, taped, bundled and packed them all in 4 hrs. flat. Moisture-set inks made this possible by permitting the warm, moist stock to be printed immediately and handled as fast as the sheets came off the press without danger of offset or smudging. No steam unit was necessary in this case, since the inks were set by the moisture content of the stock.

Another remarkable application of moisture-set inks is in the straight line production of kraft containers from board to finished packages (ready for filling with cereal) in a single plant with not a moment lost waiting for inks to dry. Here, the containerboard is run through a web-fed press and printed with moisture-set inks in several colors. Again no steam unit is necessary, since natural moisture content of the stock sets the inks almost immediately. From the press, freshly printed board is fed directly into the package-fabricating machinery which automatically forms and sets up the containers. There is not a trace of offsetting or rubbing despite the rough treatment received in the forming and setting-up operations. This is an application which would not be feasible without moisture-set inks.

In the Midwest, waxed butter cartons are produced quickly and economically with moisture-set inks on sheet-delivery presses equipped with suitable steam apparatus. The inks dry so quickly that sheets are waxed almost immediately after printing, then die-cut, scored and shipped. Both light and heavy stocks have been found to work equally well in this process and in some cases there is sufficient moisture content in the board to dry the inks without steam units. Waxed cracker cartons have also been printed on sheet-delivery presses with equal success.

In the wax wrapper field, moisture-set inks have made a permanent place for themselves with their unique odor-free and heat-sealing characteristics. On a recent job the wrapper stock was printed in four colors at 500 ft. per min. on web-fed presses with instant drying obtained by steam units. Other jobs have been run at slower speeds without steam drying, yet with satisfactory results. It is interesting to note that trapping is consistently good on multicolor wax wrapper printing even after long, continuous runs. Wax wrapper printing is one field where the new, slower drying moisture-set inks have permitted presses to be down for as long as 60 minutes for "date" changes which are peculiar to bread wrappers, milk containers, etc.

Lack of odor is most important to bread wrappers, since the warmth and moisture of a freshly baked loaf would tend to release any odors present in the ink. Heat sealing is of almost equal importance.

The frozen food industry has created a great market for moisture-set inks, since freedom from odor is a prime requisite for packages which must be stored for months in the close confines of freezers. Some foods do not absorb odors at low temperatures, but they are often mixed with those that do in home or store boxes. Thus while ink odor might not be a problem with frozen fruit package labels, these same labels could affect the taste of other nearby foods. Pre-cooked frozen meals and portions may also require inks to be odor free at high temperatures, since they are sometimes heated for use in their original packages. Moisture-set inks, for instance, were used to print the first "meal on a plate" package of frozen dinners and withstood a 400-deg. F. oven heat without a trace of odor.

Although the packaging field has now had some seven years of experience with moisture-set inks, only two of those years have been relatively free of wartime restrictions. Therefore, the new development has only recently become of age to take its rightful place as an important packaging factor.

Simplified pre-pack

Five pieces of corrugated do the work of 13 in a newly engineered container for consumer promotion of Waring Blendor

The Waring Blendor, an electric food and beverage mixer used extensively in bars, restaurants and at fountains, is now to be promoted widely for home use.

To tie in with this consumer campaign, the company wanted a new type of pre-pack that would be compact to hold the complete unit, convenient to handle and with surface design that would call attention to the product in window and point-of-sale display.

The previous pack of corrugated board was primarily a wartime design, planned to hold an extra glass container part and to undergo rough handling.

In redesigning the wartime, heavy-duty pack, therefore, the first consideration was simplification without sacrificing protection and strength and to give the consumer pre-pack the eye appeal that would be possible by white-surface corrugated printed in color.

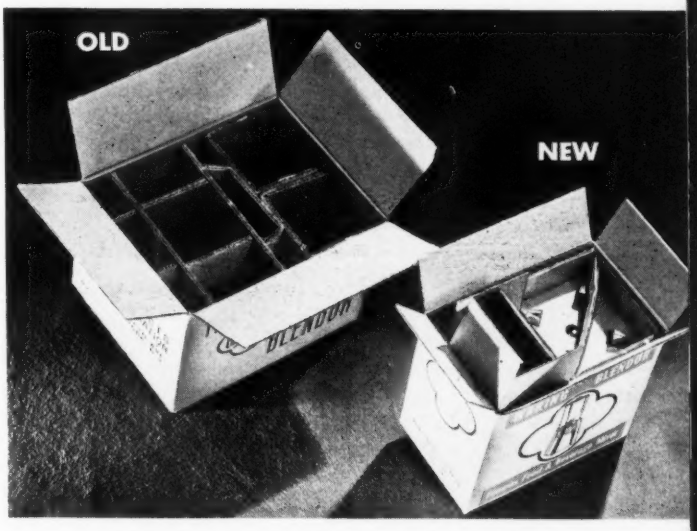
A comparison of old and new packages, even taking into consideration that the new consumer package contains only one glass unit instead of two, gives an idea of what was accomplished by an engineering study by the supplier of the container to simplify the package and to prepare a surface design identifying the product clearly. A second color, red, adds point-of-sale emphasis.

Complete assembly of the old package consisted of 13 separate pieces, including the outer box and interior protectors, whereas the new assembly is comprised of only five pieces. Weight of the old package, empty was 3 lbs., whereas the new one weighs 1 lb., 4 oz. Size of the package has been reduced from 12 by $9\frac{1}{2}$ by $9\frac{1}{2}$ in. to 10 by $6\frac{1}{2}$ by $9\frac{1}{2}$ in. The board saving represented is claimed to be 50%.

Although bulk shipments will be made in a master shipper, test shipments of the individual unit pre-pack indicate that it will carry the product safely to its destination under all conditions. This is attributed to the ingenious die-cut construction of the inner packing. The glass part is carefully protected by a rectangular corrugated carton of its own. The motor assembly and electrical cord and lid are held by two other specially die-cut pieces that fit snuggly in adjacent positions. Another scored piece is used to keep contents in place, fill up void and give support against compression.

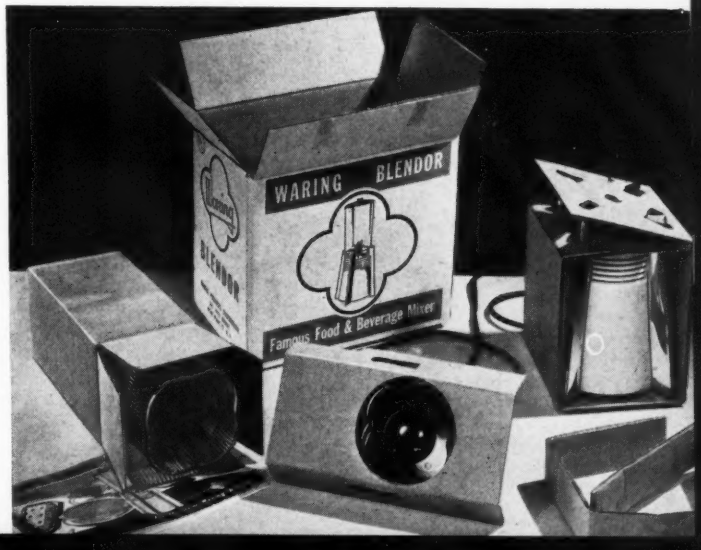
CREDIT: *Pre-pack, Hankins Container Co., Cleveland, Ohio.*

CONSUMER SELLING demanded new pre-pack with greater identity and eye appeal for window and point-of-sale display. Line drawing of product appears in outline of Waring trademark. Colors are red and black on white-surfaced corrugated.



SIMPLIFICATION of the interior packing is illustrated by this open view of the old and new containers. The new package takes only five pieces of board, whereas the old one required 13.

DIE-CUT CONSTRUCTION is illustrated by this view of package elements. The new container gives necessary protection to the product, but requires the use of 50% less board than the old one.



MODERN PACKAGING PAGEANT

1 Six of the 15 varieties of Kingan & Co.'s ready-to-serve canned meat products are now appearing with new labels, full-color printed with photographs of the products appetizingly arranged for serving. Wide bands of blue at top and bottom carry trade and product names in bold lettering for quick identity. Back panel carries serving suggestions and ingredients. Labels, Hendren Printing Co., Inc., Indianapolis, Ind.

2 Cut-out of an actual road map applied to red-and-white-striped paper and tied with a huge royal blue bon voyage ribbon was conceived by a buyer at Harzfeld's, Kansas City specialty shop, for use by the store as a distinctive vacation gift package. The bon voyage ribbon, printed in white with planes, trains and ships, is equally appropriate for vacationers traveling by air, rail or water. Ribbon, Taffel Bros., Inc., New York.

2

3 An extruded tube of transparent cellulose acetate with one end threaded to accommodate a double shell metal screw-on cap provides a handy re-use container for John Hudson Moore "Sportsman" tooth brushes. The only decoration on the container is the Sportsman name in the company's usual logotype. Containers, Extruded Plastics, Inc., Norwalk, Conn. Acetate, Celanese Lumarith.

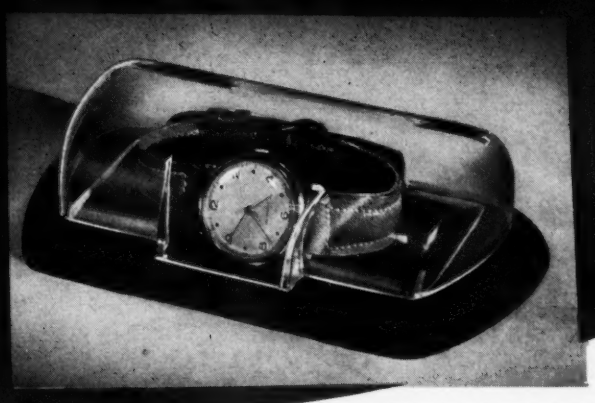
3

4 A combination case which holds two full-sized lipsticks is the latest addition to the line of Tussy cosmetics. This "Two-In-One" case is of polished brass, holds two regular-sized swivel lipsticks and comes in a red-tipped acetate container. Only $3\frac{1}{4}$ in. long, it fits in the smallest purse and offers twice as much lipstick in half the space. Container, Hopp Plastics, New York.

4

5 All candy mints made by Richardson's are now being marketed in unit packages. Bulk packaging has been completely discontinued in favor of protective packaging in convenient sales units. The line includes 10-cent cellophane bags, a 5-cent box lined with glassine and cellophane overwrapped, a cellophane-wrapped $\frac{1}{2}$-lb. box with mints individually wrapped in cellophane. Boxes, Cardinal Boxes, Inc., and John Compton-Adelphia Corp., Philadelphia. Bags, Thomas M. Royal & Co., Philadelphia. Cellophane, DuPont and Sylvania.

6 This box for watches marketed by A. Hirsch of Chicago has an all-velvet-covered base and a hinged dome of acrylic, providing an appealing gift package. The container has display value at all times, whether opened or closed. Box, Arrow Mfg. Co., New York. Acrylic, DuPont Lucite.



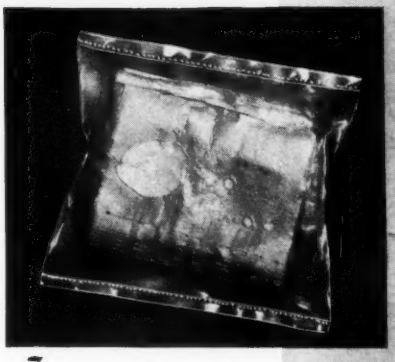
7 A polyethylene pouch for Perl, an oil sachet made by Duradene Co. for use in permanent waving, is said to be the first "wet packaging" application of this film outside the food field. The material is supplied to the user in tube form. This convenient-to-use new package replaces glass jars. Tubing, Plax Corp., Hartford, Conn.

8 Christian Bros. brandy is appearing in a new 1-gal. private-mold bottle mounted in a chrome-plated swinging stand that serves as a display and dispenser for home bars. Regular cork closure may be replaced by a white plastic pouring spout. Bottle, Latchford-Marble Glass Co., Los Angeles.

9 For increased merchandising advantage, Schaible Co. has adopted unit packaging for its plumbing fixtures and valves. Boxes are of heavy-test board with metal edges, all-over printed and end labeled. Containers, National Metal Edge Box Co., Philadelphia. Labels, Capitol Printing Co., Cincinnati.

10 Tubular transparent plastic containers for packaging hosiery (see MODERN PACKAGING, Dec., 1947, p. 102) are being used by McGaugh Hosiery Mills for their Airmaid hose. Made of cellulose acetate butyrate, these extruded seamless tubes have colored caps of the same material and are gold printed. Containers made by Extruded Plastics, Inc., Norwalk, Conn., of Tennessee Eastman's Tenite.

11 For Father's Day promotion, Eversharp Schick Injector razors have a gift sleeve of folding carton construction slipped over the regular box. Printing is in two colors on gold foil laminated board. Carton, American Coating Mills, Chicago.



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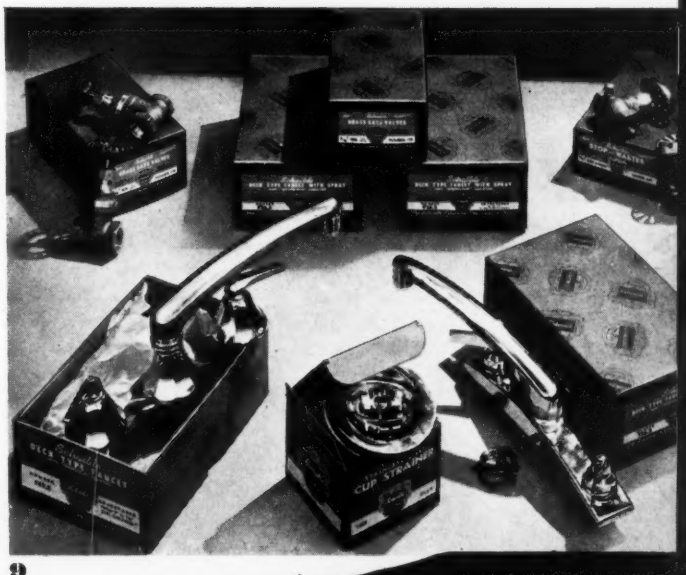

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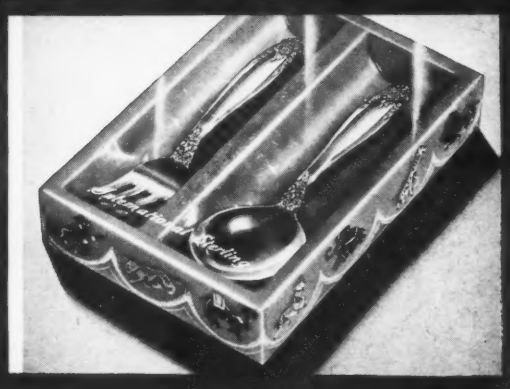


12

12 The redesigned Drene shampoo package is part of a repackaging program undertaken for Procter & Gamble's Drug Products Div. and is the result of a consumer and dealer acceptance survey. The bottle combines notched sides and a tall narrow shape for ease in handling. The black phenolic cap is a convenient measuring unit. Label and carton design have been given cosmetic treatment without losing brand identity by retaining the old buff and blue colors and lower-case lettering. Design, Donald Deskey Associates, New York.

13 An interesting way of packaging a new product is demonstrated by this visible container for "Blue Magic," a non-clogging salt-shaker set. Components of the set—salt and pepper shakers, funnel for filling shakers and cap containing chemical crystals that absorb moisture—fit into a die-cut tray, underneath which is a sheet of printed instructions for use. When not in use, the cap containing crystals is placed on the salt shaker in place of the metal sifter and absorbs moisture from the salt, keeping the salt free-flowing at all times. Container, Warner Bros. Co., Bridgeport, Conn.

14 Three different plastic materials are combined in this package for International Silver Co.'s sterling silver spoon-and-fork set for babies. The twin-scalloped base is injection molded of polystyrene. The cover is formed of cellulose acetate printed in four colors. Each piece of silver is in a pocket of extruded polyethylene. Base, F. J. Kirk Molding Co., Clinton, Mass., using Monsanto polystyrene. Cover, Shaw-Randall Co., Inc., Pawtucket, R. I. Pockets, Trans-Flex Packages, Windsor, Conn.

15 Latest additions to the line of foods marketed by Hixson Products Co. include these newly designed packages for puddings, shredded coconut and tapioca. Eye appeal of the modern, clean-cut pattern is effective in self-service groceries for impulse sale. A cellophane-windowed carton features the coconut package. Design, Harold Pobuda, Chicago. Cartons, U. S. Printing & Lithographing Co., Cincinnati, Waldorf Paper Products Co., St. Paul, Minn., Empire Box Corp., Chicago.

16 Marie Earle, in redesigning the packaging for the Ballerina bath line, has eliminated the use of paper labels and in their place features a ballerina silk screened in gold on the front of each bottle. New bottles are rectilinear in shape, topped with gold metal caps also featuring a ballerina. Box cover paper is gold-embossed chartreuse.

17 This 6-bottle carry-home Coca-Cola carton made of paperboard is fitted with double- and triple-reinforced vertical partitions to give it exceptional sturdiness. Partitions are designed to grip each bottle and relieve the bottom of any load. A metal center-lift handle depresses for compact stacking. Carton, Empire Box Corp., Chicago.

16

MODERN PACKAGING PAGEANT

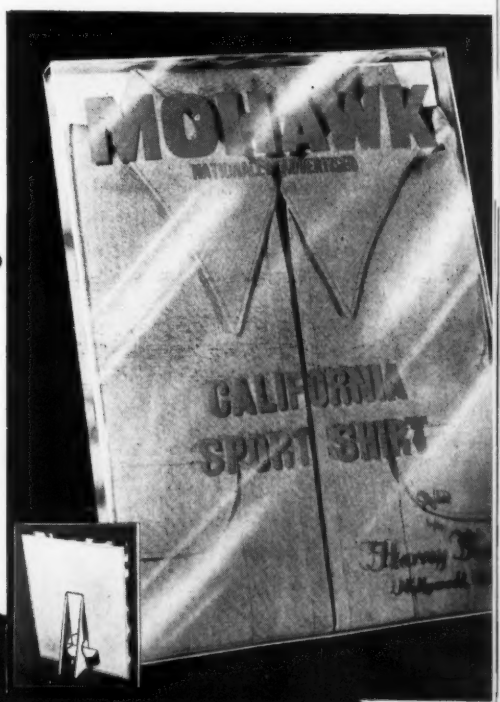
18 Ten different colors for 10 different flavors of hard candies give color excitement in mass display. Each of the new heat-sealed cellophane bags for Imperial Candy Co.'s Societé candies carries the same family design, but each flavor of candy is distinguished by different colors—red, green, orange, blue, etc.—for the top and bottom bands. The transparent center portion of bag allows visibility. Bags, The Dobeckmun Co., Cleveland.

18

19 This consumer package for Mohawk California sport shirts doubles as a counter display. The paperboard base of the box is fitted with an easel that permits it to stand on counters. The acetate lid provides visibility. Container, Showbox Div., Central States Paper & Bag Co., St. Louis, Mo., using Monsanto Vuepak.

20 The outline of a bottleneck silk screened on the cellulose acetate cover of this package for Seal Horse, a new adjustable bottle stopper for beverage bottles, is positioned directly over the stopper portion of the product to tell the "how-to-use-it" story clearly at a glance. Bottom disk carries copy explaining product use. Container, See-Thru Div., Geo. V. Clark Co., Inc., Astoria, Long Island, N. Y., using Monsanto Vuepak.

21 Dee Cee Peppermint Puffs are being merchandised in a newly designed heat-sealed printed cellophane bag especially suited for supermarket sales. Red coloring at the top attracts consumer attention, while the lower half of the bag is virtually clear for good visibility of the product. Product name is visible from vertical and horizontal positions for easy display. Because of the nature of the design, printing does not interfere with heat sealing. Package, Package-Craft, Inc., New York.



19

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21

1. PAPER LABELS serve for the Shorty individual-service fruit juice cans, sold from ice-water beverage coolers, due to special lacquer, varnish and adhesive. Babee Orng, another Paramount Canning product, has conventional type of label.

WATERPROOF CAN LABEL

Paper label that won't come off after 15 days in ice water is developed for fruit juices sold from beverage dispensers

The Paramount Canning Co., Haines City, Fla., believes it has solved the problem of paper labels for cans that must withstand long immersion in water.

Specially lacquered labels attached with waterproof adhesives have been developed for the company's Shorty brand of individual-service canned citrus fruit juices to withstand the dunking treatment the cans go through in beverage coolers.

These labels will survive at least 15 days' immersion in ice water without coming loose from the can (see Fig .2).

2. ACTUAL TEST of the label's adhesive qualities. This photograph was taken while label was still wet after 15 days under water; it is wrinkled, but otherwise it is unaffected. Even the wrinkles disappeared when the can dried.

Paramount has found its small 6-oz. cans of fruit juices becoming increasingly popular in the soft-drink beverage market, particularly in the South. Since ice water coolers, like those found at filling stations, fairgrounds and baseball fields, are usually used to chill the cans, ordinary paper labels failed to stand up even during short periods of immersion.

Most fruit juice canners, knowing the shortcomings of paper labels under such circumstances, switched to lithographed cans like those used for canned beer. Paramount, however, believed it had two arguments against the lithographed can that led it to keep up the search for a suitable waterproof paper label. In the opinion of Earl T. Myers of Paramount—an opinion that might be disputed by other packagers—lithographed cans do not take four-color printing as well as do paper lithographed l.bels, and the company wanted cans that would sell themselves by eye-catching colors and designs. Then, too, when lithographed cans were used, Mr. Myers found that if the grapefuit juice pack wasn't so large as estimated when those cans were ordered, the canner was left with an unusable supply of grapefruit-juice-designated cans.

The treatment of Shorty four-color paper labels was worked out jointly through the ingenuity of Mr. Myers and the label supplier. It consists of applying a waterproof lacquer to the under side of the label and a waterproof spirit varnish over the lithographed display side. The under side of the overlap and the top side of the underlap are left untreated, in order that lap paste may be added. Both the waterproof pick-up gum and lap paste used to seal the label on the cans were specially developed by an adhesive manufacturer. Only gaso-

line or similar solvent can remove the label once these adhesives have been applied and set, it is said.

This is believed to be the first time that paper labels have been used successfully on cans where it is necessary to place them in water for periods of two to 10 days and even longer. Paramount has packed 10 combinations of orange and grapefruit juices in regular 6-oz. cans using the new labels. Fig. 2 shows a labeled can after being immersed in water 15 days. Although the juice would seldom remain in a cooler that long, the label when it was removed from the bath was merely wrinkled, but still firmly affixed to the can. The colors remained as bright as they were when the test began.

One basic design is used for all Shorty labels: against a midnight blue background appears a full-color illustration of a hand holding a glass of the juice. For quick visual recognition, the natural color for the contents of the glass is reproduced, thus orange juice is a true shade of orange, grapefruit juice is pale yellow and the orange-grapefruit juice combination, a deeper yellow. Item, net weight and essential information are printed in bright orange to the left of the illustration. The Shorty name appears in reverse white both on the display side above the illustration and in the sell copy given on the back.

The paper lithographed label for Paramount's new Babee Orang—orange juice with dextrose added—is done in shades of pink and blue with a full-color illustration of a baby. The same waterproof lap paste and pick-up gum are used for applying this label, assuring that it will not come loose when the can is stored in a refrigerator.

CREDITS: *Labels, Independent Lithograph Co., San Francisco. Adhesives, Dewey & Almy Chemical Co., Cambridge, Mass.*

BLANKETS FOR FLOWERS

Creped cellulose wadding in blanket form provides an efficient insulating box liner for the highly perishable bulk shipments of cut fresh flowers United Wholesale Florists of California, Inc., Los Angeles, sends via air freight from coast to coast.

In a letter to its customers explaining an extra 35-cent charge on invoices due to increased cost of packaging with the creped wadding, the company preserved good customer relations by telling why, even though it costs 56 cents more per box than the newspaper sheet lining formerly used, the wadding actually saves them as much as $1 a box in air freight costs, and how it insulates the flowers against excessive heat or cold. Weight with newspapers was 3 to 5 lbs. heavier per box than with the light-weight wadding.

Punch-embossed creped wadding 0.23 in. thick with 16-lb. white tissue backing is used to line the three sizes of the double-faced corrugated shipping boxes.

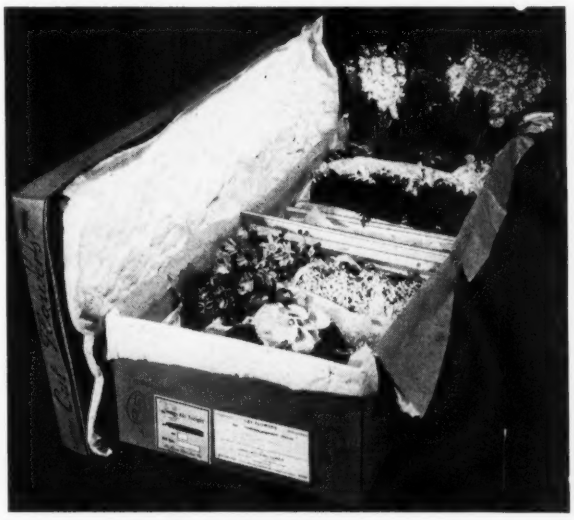
The white backing gives an attractive setting for the flowers, yet is strong enough to prevent the stems from puncturing the wadding.

Strips wide and long enough to cover all the sides and bottoms of the boxes are cut from rolls 24 and 48 in. wide. Allowance is made in cutting for the 3-in. extension over the sides which is folded over the flowers before the top blanket is added.

The inner lining is always placed with the tissue side next to the flowers and is stapled to the box sides. No other protection is given to the box after the lid is tied.

Harold L. Archer, assistant general manager of United Wholesale Florists, sums up the advantages found in using the creped wadding thus: "The saving in freight, the added protection, the ease with which it is handled and the facts that you can pass part of the cost on to your customer without any repercussions and he can re-use the wadding in his shipping, definitely establish it as the least expensive and by far the best insulation known to our profession for air shipments."

CREDITS: *Creped cellulose wadding (Kimpak), Kimberly-Clark Corp., Neenah, Wis.*



EMBOSSED CREPED WADDING faced with white tissue surrounds fresh flowers for insulation during air shipment. No additional protection is needed.

ADAPTABLE LABELS

Single standard label with finished look replaces hodge-podge of imprinted makeshifts, boosts sales of Sillers' 1,000 paints

PRINTING IS SIMPLIFIED by using a single master plate for uniform top portion of all labels; dark green product band at bottom is separate reverse plate, changed during printing run according to production schedule. Color designation at upper left is added at Sillers plant, but on printing press with same green ink—not multigraph stamped.

The problem of devising a label that would give manufacturer identity to a line of paints and varnishes, yet allow variations for the more than 1,000 different products within the line has been successfully solved by the Sillers Paint & Varnish Co., Los Angeles, with their new labels.

The Sillers problem necessitated the planning of a design so flexible that it would accommodate not only the range of products, but also a color breakdown of as many as 50 hues for each type of paint and 22 different shapes and sizes of containers.

Basically, the Sillers label problem is one that is shared by all paint and varnish manufacturers. Once a label is designed and printed; it must go through two additional imprintings—one for the product identification, one for the color designation. The customary way of handling this double imprinting is to allow for a mortise or some other type of blank panel within the original design, in order to take the imprint. This not only limits the design possibilities in a label, but when the imprinting is handled on a different press from the original printing, the job lacks integration and has a patchwork appearance.

When John Vaughn, current Sillers owner, took over the plant more than a year ago, he was particularly aware of the defects of the label then in use. Formerly a Sillers sales executive, he was sensitive to the sales potential contained in an efficient and well designed label.

His dissatisfaction with the label then being used by his company was not based solely on the problems presented by imprinting. It had been designed in the late 1920s and needed to be brought up to date. It was black bordered because it had been introduced during

the period when black furniture was in vogue. Within the black border was an inner border, at the top and bottom of the label, of three zig-zag lines—green, red and black.

This pattern was attuned, design-wise, to the popularity of angular "modernistic" furniture during that decade, but now it is hopelessly outmoded. The top portion of the label carried the word Sillers; however, in some instances it carried instead the trade name of the product itself—Silvaco, Masterkote, Sil-Pa-Co, etc. Beneath that name were two blank panels for imprinting. The lower portion of the label was in green, with the Sillers company name being reverse printed in white.

In terms of merchandising, this label had two major disadvantages. First, the name Sillers did not always appear in the same place. Sometimes it was printed in red at the top of the label, but at other times it showed up only in reverse at the bottom of the label. Second, the "Paint & Varnish" part of the company name was always buried in the reverse panel, where it could not easily be read.

During recent years, several interim solutions were attempted for individual products within the line. For instance, about nine years ago a new label was designed for Siller-Glo. Because the product was intended for interiors, the label emphasized feminine appeal; it was executed in yellow and blue and adorned with a drawing of a room interior. Although it was considered an improvement over its predecessor, its design was not suitable for the rest of the Sillers line of products.

Finally, under the new Vaughn regime it was decided to abandon all current labels and work out a completely new label for the entire line. More than six months of experiment and testing were applied to the problem and the label which resulted, worked out by a Los Angeles designer, has overcome the disadvantages presented by the former one.

Development of new design

The new label maintains some continuity with the old, to the extent that the two principal colors—red and green—are retained and the name Sillers is still printed in red. Beyond that, it is entirely new in conception and execution. The label is white, with a dark green border at the bottom. The words Sillers Paints or Sillers Varnish, as the case may be, are boldly printed in modern, sans serif letters in red, outlined in yellow. It is impossible not to get the impact of the firm name by even the most hasty exposure to the label. At the top of the label are a series of four fine horizontal yellow lines, interrupted at the right by the newly created Sillers trademark—an interest and recognition element that was completely lacking in the old label and which adds considerably to the eye appeal of the newly designed labels.

The most ingenious aspect of the new label is the manner in which its design contains a solution to the imprinting problem. The dark green border at the base of the label is not a part of the over-all plate from which the printing is done. Instead it is a separate reverse plate, carrying the name of the product. When an order for labels is placed with the printer, the order is broken down in terms of individual products and the border plate is changed as often as necessary during the

INTEGRATION achieved is indicated by comparison of group of new labels (left) with old. Note that each product group has its distinctive typography on bottom product band to aid in quick identification. The trademark design is new.

PRINTING PRESS in the plant makes it easy to imprint color designations of paint as required without marring the glossy, finished appearance of the label.

primary printing process. This gives Sillers a label which looks all of one piece and yet which includes the necessary copy changes for their widely diversified range of products.

Each product plate is done in a different style of lettering, so that the Sillers dealer has a series of uniformly labeled containers, yet is helped in locating the individual products easily and quickly by their characteristic letterings.

In a few instances, so few labels are needed for an individual product that it does not warrant the expense of a separate name plate. To take care of these cases, a certain number of labels are run off with only a blank panel in the border plate, so that a small quantity can later be imprinted as the need arises.

This leaves only the final imprinting for color designation to be done after the label is printed. Whereas with the old label the imprinting was done by Sillers on a multigraph press, the plant has had installed a small printing press and has had made up a series of plates to cover all color names. The letters on these plates conform to the modern type face which is used elsewhere in the label and they are imprinted in the same shade of dark green which is used on the border. The color name is placed not within an enclosed panel, but in the clear area between the second and third of the horizontal lines at the top of the label. As a result, although the imprinting is a special operation done by the manufacturer, the net effect is that of a single finished label, carrying product and color information, but designed and executed as a complete unit.

One of the requirements for the new label was that it appeal equally to men and women customers. Although men are more frequently the actual users of paints, women are often the shoppers for household paints. On the other hand, since Sillers also sells industrial products, the label could not be so feminized as to be unacceptable to industrial purchasers. The new label is bold and simple enough for masculine appeal and yet has feminine appeal, especially in the new trademark, which is a stylized rendition of an impish boy clad in the traditional smock and beret and playfully wielding a paint brush. The arc which he describes with his brush is continued with the slogan: "Quality since 1910."

A further improvement in the new label is the choice of stock. The old label had been varnished after printing, but the varnish could not be applied to the mortised areas, since it would interfere with the imprinting. The new label is on a special high grade coated stock which is glossy enough to be attractive and eye catching, yet porous enough for overprinting.

Except for special orders which require hand operations, all Sillers labels are affixed by machine after the containers have been automatically filled with product and capped.

The design for the label has been generally adopted in all Sillers promotional material and forms the basis for decals, department panels, ad mats and window and counter displays.

The new label has been unanimously hailed by the more than 250 distributors in Southern California who handle the Sillers output. They report that it lends itself to neat and effective shelf displays, that it is winning brand-name acceptance with consumers and that it aids them in speedy service to customers.

CREDITS: *Label design, Tinsley T. Jepson, Los Angeles. Printing of labels, George Rice & Sons, Los Angeles. Plant printing press, Chandler & Price Co., Cleveland. Filling machines, C. M. Ambrose Co., Seattle. Automatic can-closing machine, Roe Machine Works, Tenafly, N. J. Labeling machines, Standard-Knapp Corp., Portland, Conn.*

MEMORY VALUE is established by blue background for company name on all the bags. Top half of bag carries illustrations, drawn by a Northwest farmer-cartoonist, depicting the various animals to which each of the products may be fed.

BARNYARD DESIGN

Colorful cartoons of cows and chicks on burlap and cotton bags bring new eye appeal to the feed store

On the theory that textile bags for chicken feed and hog mash need as much sales appeal as breakfast food cartons, Centennial Flouring Mills Co., Seattle, is applying grocery store packaging techniques to new animal-feed packages.

Eye appeal and remembrance value were the goals in redesigning the feed bags, according to Dwight Howell, manager of Centennial's feed division. The streamlined new packages establish family identity by using the same colors and design layout for all six packages.

A saucy cartoon sketch of a barnyard animal dominates the top half of each sack. A head of a well-bred cow with a come-on look and long eyelashes peers from the Dairmeal bag. A strutting hen toting a bag of eggs marches across the top of the egg-mash bag. A porker, kerchief at neck, grins from the hog-feed bag.

Over the cartoon in bold letters is the name of the product. The bottom half is uniform for all packages—a solid blue from seam to seam with the company name, address and "Centennial Health-Builder Feed" slogan in reverse white. Lists of ingredients and guaranteed analysis of the feed—worst stumbling blocks in cleaning up the package design—have been removed entirely from the face of the new package and are printed on a separate tag sewed into the top seam. Getting rid of the blurred, small printing was a major improvement.

No small part of the appeal in the new package is due to the good reproduction of the colors used on the burlap bags. Cotton bags, in which some Centennial feeds are packed, presented no problem in the new package production. Burlap, however, does not take kindly to color register and all-over printed design. Careful planning of art work and close cooperation of the bag companies assured good color register and ink coverage.

All Centennial advertising in the Northwest now features the new package.

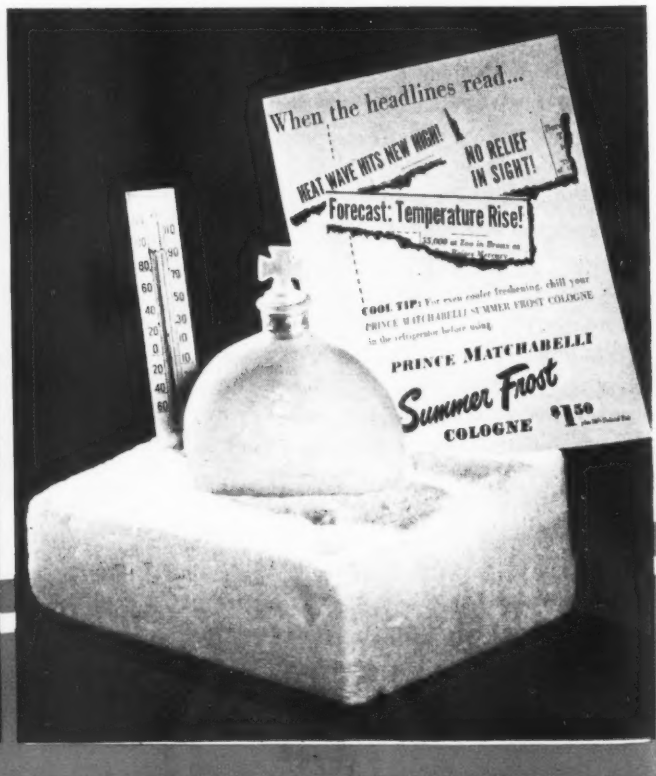
CREDITS: *Cartoon design, Wellington Groves. Bags, Noon Bag Co. and Chase Bag Co., Portland, Ore.; Bemis Bro. Bag Co., St. Louis, Mo.*

Colgate-Palmolive-Peet's printed corrugated shipping case designed for store display use is a giant replica of the Palmolive soap wrapper. It is an excellent example of the effects to be achieved through use of now available color-printed corrugated board. Case has a jute liner and is printed with special inks. Its merchandising assets are consistency of impression and unity in color of soap, wrapper and shipping container. For display, the case is cut along dotted lines and the riser piece inserted. Carton, The Ohio Boxboard Co., Rittman, Ohio.

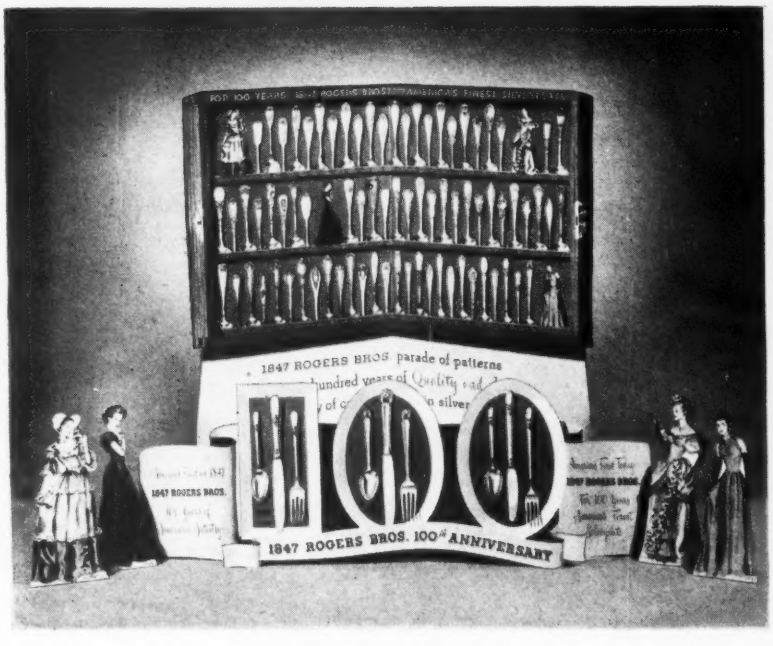
Two display cartons have been introduced by Cragg Products, Inc., for self-service merchandising of Model-Weld, new packages of household and handicraft cement. One holds a dozen tubes packaged in folding cartons. The other contains three dozen unpackaged tubes held in place by paperboard dividers. Subtle gray, maroon and light blue coloring of individual cartons and tubes contrasts effectively with the strong red, yellow and black coloring of the display cartons. Line drawings on displays show uses for the product. Design, Gerald Stahl, New York. Cartons, Accurate Box Co., Inc., Newark, N. J. Tubes, J. S. Turner White Metal Co., New Brunswick, N. J.

By using photographs of four Powers models, this easel display for Kreml shampoo promotes the product slogan, "Used by famous Powers models." The photographs are reproduced in full color, with the name of each model beneath each. Display, Hussey-Woodward, Inc., New York.

Unique reclamation of government-surplus foam plastic, used during the war on airplane wings to provide bouyancy, is this block of "snow" with a thermometer placed alongside it to create a striking hot-weather display for a bottle of Prince Matchabelli's "Summer Frost" cologne. A Matchabelli designer got the idea when she saw the material in the display company's studio. Card in back reproduces newspaper headlines on the weather. Display, Arts & Flowers Display, New York.



MP Display Gallery



An excellent way of presenting a wide variety of small items is this six-unit display—which may be used as a single unit or separately—for Roger Bros. 1847 silverware, designed to celebrate their 100th anniversary. The display is lithographed in 10 colors, with a reproduction of a chest holding a complete collection of their patterns since 1847. Display, Consolidated Lithographing Corp., Brooklyn, N. Y.

Skol's sunburn lotion is being promoted this summer by this three-dimensional display piece featuring two realistic and life-like bathers. The bottom section represents a sloping beach with a lithographed reproduction of a bottle of Skol popping upright. Center piece is lithographed in eight colors. Display, Einson-Freeman Co., Inc., Long Island City, N. Y.

McKesson & Robbins' complete line of Tawn toiletries fits into this display. Stand is paperboard; lithographed paperboard back piece represents a man viewing himself in a mirror, with products and prices listed on each side. Stand, Manufacturers Box Co., Bridgeport, Conn. Back piece, Plampin Litho Co., Inc., New York.

This combination display and stock case for Richard Hudnut's hair beauty preparations has five shelves for effective display of single bottles, as well as packaged sets. Made of sturdy paperboard, the display features a glamourous feminine head in full color. Display, Kulay Advertising Displays, Inc., New York.

INGENIOUS SHIPPER

Maker of mirrored vanity boxes devises a carton quickly set up from a single piece of corrugated, with all pads and supports integral; reduces breakage from 20 to 2%

1. CONVENTIONAL in appearance, this folding paperboard carton is unconventional in design and handling. It protects re-use gift package chest en route from the maker to the packager; permits the product to be filled without removing the chest from the carton and again protects the package all the way to the consumer.

The package supplier may have a difficult packaging problem right in his own back yard. A case in point is that of Kobro Products, Inc., Brooklyn, N. Y., which has to ship its mirrored miniature chests and vanities, used for re-use gift packages, to such customers as Loft Candy Corp. and Wallace & Co.

In the past, the breakage rate has been as high as 20% of boxes shipped. A new one-piece, die-cut corrugated carton designed and patented by Irving I. Kloner, president of Kobro, reduced breakage to less than 2% by integrating all parts of the carton and its cushioning.

In addition to protecting these fragile packages, the carton is designed to serve as the only one necessary from the time the box is shipped out by Kobro to the time the consumer receives it. The vanities and chests may be packed with candy without being removed from the carton—a good sales argument in their favor.

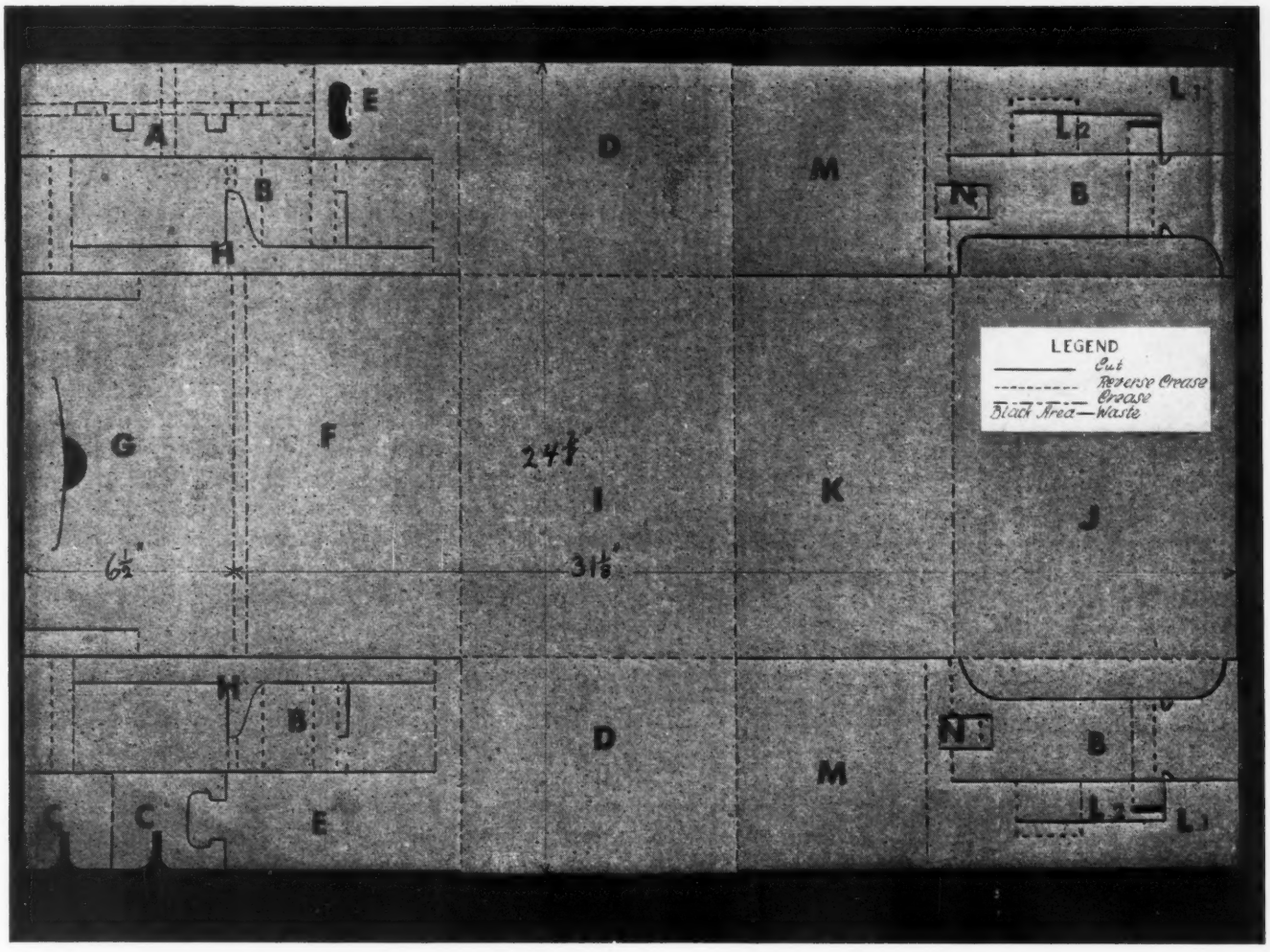
Before the new carton was adopted, the boxes were shipped in corrugated cartons with the separate cushioning and bracing parts fitted around the chests or vanities by hand. For each style of vanity, special cushioning pads had to be provided. When the user received the packages, he had to remove the chests from the carton in order to pack them with his product. Then the filled package had to be repacked in the carton and, according to Mr. Kloner, sometimes the cushioning pads were not all replaced or, if replaced, not put back into their original, complicated arrangement.

The whole process was costly both in labor and in material. The old carton required 775 sq. in. of corrugated board plus cushions requiring almost an equal amount of corrugated, each style of chest requiring slightly different shapes. The new carton can be used for almost all of the styles with minor modifications already provided in the die cutting and takes considerably less corrugated board.

The new carton is completely formed from a single rectangular piece of board $24^{7}/_{8}$ in. wide and $37^{5}/_{8}$ in. long, comprising 936 sq. in. The ingenious design is such that there is virtually no waste from the blank, as may be seen by studying the diagram of the blank shown in Fig. 2. The blank is sufficient for all side walls, cushioning and bracing sections as integral parts of the carton. The carton blank is delivered to Kobro die cut and scored for folding. Since all the folding is inward, printing is done on one side by the supplier.

Assembly of the shipping carton begins with the formation of the side cushioning, as shown in Fig. 3. The corners of the blank provide the cushioning pads and the extra strips (*A* in Fig. 2) which will ultimately hold a stand-up mirror for the mirrored vanity. Each corner is divided into upper and lower sections. The bottom parts of the back and front corners (*B*) are bent into their proper shape to form the cushion pads by following the scored creasing lines. Two folds in these bottom strips create the primary side-cushioning pad. To keep this pad which resembles a pleat (see foreground of Fig. 3) from collapsing, separate reinforcing slotted pieces (*C*) are slipped over and behind the pad and hold both folds together. These strips are creased to the outer walls (*D*) and stapled to them with one stitch near the front corner, as shown in Fig. 3. Scored guides on the outside wall indicate the exact spot where the stapling is to be done. Depth of the side-cushioning space thus formed is $^{3}/_{4}$ in.

After each side-cushioning pad is secured to its out-



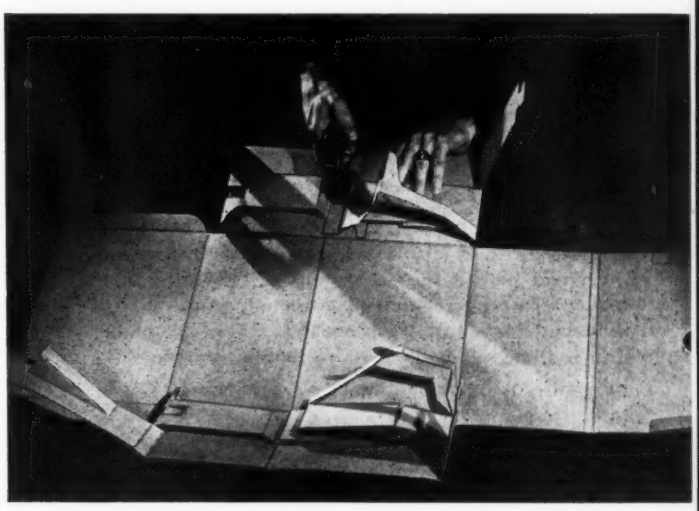
2. THIS IS THE BLANK that forms the carton. There is virtually no waste in the blank as corners and strips that normally would be discarded are left attached and used for padding. Lines and lettering have been inked in here for purposes of explanation in story. Side padding comes from pieces marked A, B and C. Side walls and back flaps are formed from D, E, F and G. The die-cut wings, L1 and L2, go across the front and top inside the outer walls, K and M.

side wall, the upper halves (*E*) of the back corners are folded and locked into position by means of a lack tab, making an inner back section, as shown in Fig. 4. The back outside wall (*F*) has an overlapping flap (*G*) which folds over the inner section. The flap has two narrow strips approximately 3 in. long cut loose from the main body of the flap at the end which fit over the side-cushioning section, creating additional braces.

Note that when the back of the carton is assembled there are three corrugated thicknesses in place—the inner section, the overlapping flap and the outside wall. Allowance for each thickness or fold is made so all sections fit together compactly even in the corners. A detail in the design of the back overlapping flap is the die-cut, curved slot to hold the stand-up mirror.

The bottom cushioning for the carton (see Fig. 4) consists of two strips (*H*), each $^3/_4$ in. high, which are separated from the lower side-cushioning when the latter are formed. Tabs at the centers of the strips are stapled together. The result is two triangular wedges, acting as bridges over the bottom wall (*I*).

Assembly of the carton has now reached the point



3. SETTING UP starts with the folding of the side-cushioning sections. In the foreground, the section is already stapled in place and the "pleat" pad is clearly illustrated. The tabbed strips which make two bridges across the bottom for cushioning will be stapled together later.

4. WALLS ARE SECURED when the back is formed. Note the inner back sections which lock together and how the outside back wall with its overlapping flap are being moved into position. The two strips on the ends of the flap slide over the side-cushioning space and serve as braces.

5. AT USER'S PLANT, front opens when top and front panels are folded down, providing access to drawer in which product is packed without removing chest from carton. Since all padding is integral, it cannot be lost or misplaced.

where it is ready to receive the chest with its mirror.

Particular attention was paid in designing the carton to achieve two goals in the front opening. The top cover (*J*) is an overlapping flap of the front wall (*K*); consequently, when it is opened the entire front automatically drops down as shown in Fig. 5, thereby exposing the top and the front of the mirrored vanity. This allows the user to fill the drawers and compartments with candy, etc., without removing the vanity.

Since the user often trims the top of the vanity or chest with ribbon bows or floral decorations, the top must have a protective device to prevent these decorations from being crushed. For this purpose, two wing sections each $2^1/_2$ in. high are used. These wing sections come from the front corner of the blank. A lengthwise slit from the end divides each section into two smaller strips (*L1* and *L2*). As shown in Fig. 6, this forked arrangement enables one part (*L1*) of the wing strip to slide diagonally across the chest from the center to the side, holding down the two lids of the small compartments on the top. The short arm of this fork drops into the side-cushion space and serves an an additional cushioning thickness. The other fork (*L2*) slips along the center to prevent the decorations from sliding.

These wing sections are actually extensions of the inner front panels (*M*). The panels are separated at the bottom from the front outside wall (*K*) and they, too, swing with the wings when the outside front wall and its top overlapping flap are opened. Cut-out sections (*N*) in the panels where they fold into the center (see Fig. 5) fit around the chest drawer-pull.

When the carton is ready to be closed, the front outside wall with the top flap is pulled up and over toward the back, pushing the front panels with their wing extensions into their proper position, as indicated in Fig. 6. Tabs on the top flap are slipped inside and a single strip of gummed tape over the edge of the top and the back wall seals the carton.

The finished carton measures 12 in. by $8^7/_8$ in by $6^3/_4$ in. Printing on the top indicates the side to open and space is ruled for the addresses of the shipper and receiver. Printing on the side warns that the contents are fragile. Item descriptions are given on side walls.

6. CARTON IS CLOSED by folding the front pads and stays inward, folding the top over and sealing with gummed tape. Note the wing sections that protect artificial flower placed on top of chest. Back mirror, shown upright in Fig. 5, is stowed in a slot provided at back of carton.

17th Annual

PACKAGING CONFERENCE and EXPOSITION

Cleveland, April 26-30, 1948

The American Management Assn. Packaging Exposition and Conference next year will return to a four-day schedule and will be held May 10 to 13 in the big Convention Hall at Atlantic City, where the 1946 event was staged, it was decided by the Exhibitors Advisory Committee at the close of last month's 17th Annual Exposition in Cleveland. The 1950 show was set tentatively for May 2 to 5 in Philadelphia, indicating that the AMA does not intend to return to its prewar practice of alternating between East and Midwest.

John M. Cowan

John M. Cowan, manager for market development of The Dobeckmun Co., Cleveland, was elected chairman of the Exhibitors Advisory Committee, replacing Alan S. Cole, general manager of MODERN PACKAGING, who had held the post for the last two years. Mr. Cowan will be in charge of arrangements for next year's Exposition.

This year's Exposition and Conference, visitors agreed, both were of exceptionally high caliber. The Exposition occupied a record 100,000 sq. ft. and was visited by 13,800, with buying activity at the highest peak since prewar days.

The Conference, which was attended by 900 members, was notable for the two clinics on Wednesday and Thursday, which were organized on a more ambitious scale than ever before.

Following is a summary of proceedings at the five Conference sessions:

MONDAY MORNING

Chairman, E. A. THROCKMORTON, *president, Container Laboratories, Inc., Chicago, and vice president of the Packaging Division, American Management Assn.*

The Short Term Outlook for Essential Packaging Materials—LEE R. FORKER, *general purchasing agent, Quaker State Oil Corp., and chairman, Container Committee, National Assn. of Purchasing Agents.* According to his observation, Mr. Forker said, management today is more keenly interested in containers than ever before. Cost of packaging has increased 30 to 150% from prewar levels. With the return of a buyer's market, your customer is more prudent with his purchase dollar. Your market is jeopardized by shoddy, cheap and ineffective containers. More attention has been given to quality control, higher speeds of filling and handling to minimize costly labor overtime, improved loading and bracing for shipment is now in effect and some industrial firms have restyled their entire line of packages for customer eye appeal. The "new look" in packages is definitely here!

The status of the container industry, referring to all styles of packages, whether constructed of steel, paper, wood, glass or textiles, represents a good index to industrial activity. As a barometer of business, Mr. Forker pointed out, the container industry is very sensitive to reflect consumer demand of all types of products.

The weekly business index of the *New York Times* includes as one of very few considered items the production of paper linerboard. Its record is compared with such basic economic values as rail carloadings, steel and oil production, electric power demand and, thus, can truly be considered a cross section of business conditions, reflecting as a sensitive business barometer the health of American business. It shows today that the demand is strong for containers.

Mr. Forker then summarized the supply and availability situation for the following types of containers and materials.

Petroleum products for packaging. The future wax supply and demand now indicates a continued short supply for the balance of 1948.

Textile shipping containers. The demand for textile bags decreased during the first quarter of 1948, resulting in better availability and decreasing costs per unit. At this time it is difficult to predict further changes, but most buyers of cotton and burlap bags are purchasing for immediate requirements and *not* building huge inventories. With the decline of our export business and to a serious degree since late 1947, it is quite possible that textile bag demand will continue soft throughout 1948. Mr. Forker reported that at least one large textile-bag buyer expected burlap to continue its price decline and that lower prices will prevail, due to paper bag competition.

Metal containers. Future price trends and availability will be geared directly to sheet steel production. No facts are present now to indicate a decreased demand to any substantial degree.

Metal cans, constructed of tin mill production, 29 gauge and lighter, are now more readily available than at any time since the beginning of World War II. This fact, however, should be considered with the fact that food cans, which exceed over 50% of all can production, are not yet in seasonal demand and will not reach the peak of consumption until in or after July. However, estimates for food packers' can requirements are less than 1947 actual packs—due primarily to carry-over of canned food stocks. It is reported that more

steel should go into containers in 1948 than was used in 1947 and it can be assumed that general line cans (other than food) will show a substantial increase. Thus can producers will approach their prewar diversion of can demand of 50% each for food and non-food cans as compared with the approximate 85% of all cans being used for food during the war. Since most large can packers purchase requirements under contract, there is little chance of any price change for the balance of 1948.

Collapsible tubes, in most cases constructed of extruded lead or lead alloy and aluminum, are now readily available. The price of lead which increased about two cents per pound in early April will be reflected in the tube price, perhaps giving a cost advantage to the aluminum item. Since tube containers are used for cosmetics and other specialties, it is expected that the demand will not exceed that of 1947 and it is predicted that supply for this year will be adequate.

Glass containers. Glass containers, Mr. Forker observed, are currently being produced at a level approximately 25% less than the 1946 and 1947 rates. This decline has affected non-returnable beer bottles, returnable beer bottles, liquor and dairy containers. A slight demand increase was recently noted in beverage and wine bottles. Manufacturers' stocks of glass containers recently were reported at the highest level in three years. The decline in demand is caused to some degree by prompt availability of substitute metal containers, oftentimes at lower initial cost, and also to the growing demand of treated paper containers. The glass industry grew tremendously during the war, with glass replacing metal. Their volume was further increased to exceed one hundred million gross per year by standardization of mold use. Operating supplies, to include soda ash, iron-free silica and paper boxes, are not now a serious problem for production. Because freight on glass containers represents a large part of the cost, there is a tendency to localize purchases, giving smaller inventory, better turnover and very close control on quality. There is nothing now to indicate that present trends on availability or cost will materially change for the 1948 packing season.

Wood shipping containers. Even with government foreign aid, it is predicted that wood box requirements for export in 1948 will be less than 1947 usage. Mr. Forker noted that competition is keen, deliveries prompt, but operating supplies are reported in short supply, referring to steel hoops, cement-coated nails and wire. For the balance of 1948, demand for heavy duty crating should continue firm, since it is expected that that type of production (capital goods) will continue at the present level. This same conclusion might be reached for the vegetable and fruit pack, large users of wooden containers. Demand for tight cooperage still continues high and any decrease in volume due to the "distiller's holiday" has not been noticeable. Slack barrels are available with reasonable advance scheduling.

Paper shipping containers. New, modern paper mills and linerboard manufacturing improvements have increased available supply of paper shipping containers to the extent that there is no shortage at the present time. This situation, coupled with the decreased demand of many consumer items packed in paper, has increased competition to a marked degree for the first time in several years. It has been recently announced, Mr. Forker remarked, that the expanded national defense program and its probable government controls will cause dislocations and reduced production in the paper and pulp industry due to shortage of manpower. Predictions are difficult, since government plans are still in the formative stage. Personally, Mr. Forker said he believed that supply and demand of paper and paperboard will not be interfered with to as large a degree as experienced during the war. Even with substantial freight cost increases and one substantial paper price increase since the first of the year, paper container prices are firm, tempered with a few decreases. Folding cartons, paper bags, tubes, drums and cans, he concluded, continue to be available with improved quality and without any recent reported price changes. It is important here to mention improved packing, sealing and handling equipment recently designed, although deliveries of such equipment are often six to nine months.

The Value and Preparation of Adequate Packaging Specifications—HAROLD F. COLEMAN, *United-Rexall Drug Co., Boston.* Mr. Coleman began with an admonition: Unless you study your specifications from time to time, how can you possibly know your costs or how can you properly determine how to cut costs or make improvements in your packaging leading to better sales and more profits?

Specifications for packaging, then, fall into two sections:

a. Those that deal with the component parts.

b. Those that go into the assembling of the finished article.

Therefore, it is advisable to deal first with those concerning the individual parts, such as bottles, caps, labels, cartons, applicators, ribbons and so forth.

Now, Mr. Coleman went on, let us take another example of this loss in time and materials. Let's consider a 16 oz. Boston round bottle, with which almost everybody is familiar. Nearly all glass companies stock 16 oz. Boston round bottles. Therefore your purchasing man, unless he has a basic contract, buys from one organization and then from another. Sometimes he buys in reshippers and sometimes he buys the bottles in service cartons and furnishes his own corrugated. When he buys the corrugated, he gives the corrugated box maker a sample of the 16 oz. Boston round bottle made by one glass maker. Later, for one reason or the other, he buys from another glass company. Now, he has not given the corrugated man one of the bottles from the second glass company because he knows nothing about specifications and thinks that all 16 oz. Boston round bottles are the same. Any glass man in the house here will bear with me that they are not. A slight variation in diameter is often found in different manufacturer's ware. The bottles coming from the second glass company, just mentioned, may be larger than those from the first glass company and, consequently, will not fit properly in the corrugated case already purchased.

This may cause a bad packing condition, slowing down production or creating excessive breakage when the merchandise is shipped. No explanation is needed for the actual cash losses which ensue from this purchasing practice, all of which could have been averted if the purchasing agent had been furnished with a set of specifications which covered his bottles and cases.

The development and maintenance of specifications, continued Mr. Coleman, is not an easy task and in an organization such as the United-Rexall Drug Co., it becomes one of considerable expense. The losses which do occur due to lack of not having specifications far exceeds any possible cost that may be entailed in setting up and maintaining specifications.

Let's examine for a minute one method of setting up specifications. If you have a specification department or packaging department, then it's simple and very easy to turn the matter over to them to set up your standards for finishing ma-

terials. However, if you haven't, whether it's a small or large company, it seems to me the first thing to do is to take a stock of old packages or contemplated new ones, sit down and write out the basic parts, such as bulk, bottles, caps, labels, circulars and cartons, if any, display container, shipping case, the number of units in a shipping case, whether printed or labeled, etc. Then, when you have them in such form as you think it necessary for your particular business, collate all of your caps, bottles, etc., and from this breakdown, you can work out the specifications for each particular part. It would be best, of course, to have your purchasing department give you the assistance of your suppliers in the development of specifications for any one of the finishing materials. There is no need, in our opinion, to build specifications which are too complicated. The simpler but more complete you can keep them, the more successful they will be as specifications.

The operation of any manufacturing organization producing finished packages can only be at its highest efficiency and operate at its lowest cost if you do the following:

1. Set up finishing specifications for each part of your package.
2. Have these specifications in such form that anyone in your organization can understand them.
3. Give your purchasing man standards on which to buy and pass on to the supplier.

You can then, and then only, be assured that you are really doing a good, sound packaging job.

Up to this point, Mr. Coleman remarked, he had dwelt largely on specifications for various parts that go into making a finished package. Now, he went on, we come to the second part of this work and that is the specifications that go into the assembling of the finished article. We have found that the only practice that is worth while is to centralize the control, which we term "finishing specifications," in the hands of one man or one department. Each individual part of the package is given its own code number and control number and then they are assembled into a working specification sheet or blueprint from which copies can be drawn and used in the production department of the organization. These specifications, then, become your finishing standards and no one should be allowed to change them in any way except the one man responsible for collating the information that has gone into the building up of the specification sheet for the finished article.

Too often, Mr. Coleman continued, it is found that a specification has started very nicely and then some person in the factory receives from the stock room a part which is not exactly the same as called for in the specification, but since it will fit, he will use it. Sometimes he gets away with it and sometimes he doesn't. No one has the right to change this specification or use a substitute without the approval of the specification man. If he had consulted the specification man, the job would have been stopped until such corrections could have been made. You may say that this might not be workable and in some instances too annoying, but in the long run if this rigid control is kept, you will find that you will have less rejections of your merchandise, less trouble with breakage, leakage or any one of the many headaches which assault manufacturers of packaged merchandise.

An Objective Scrutiny of Package Printing Processes—E. H. BALKEMA, *Purchasing Department, Colgate-Palmolive-Peet Co., Jersey City, N. J.* Mr. Balkema announced that the purpose of his paper was to discuss the identification of printing processes and their application to individual printing problems. It was his intention, he said, to show that each process fills a definite need in the proper reproduction of original designs which is now so necessary when it is the duty of each package to say "Take me home."

The discussion really concerns the proper use of the three principal methods of printing as applied to the production of packaging materials. Such a discussion, he admitted, is full of dynamite and repercussions may be considerable.

Let us first consider color printing as applied to packaging materials produced with paper or paperboard. It has been reported that sight controls 87% of our impressions and 85% of our deliberate movements. The proper use of color can affect your work, your emotions and your purchases. Therefore, you can see how the proper selection of the correct printing process is so essential in interpreting art work and in building "buy appeal" into your packaging materials.

Generally speaking, where intensity of color is required, the letterpress or the gravure process is indicated. In the soap industry we use the letterpress process almost exclusively in obtaining this effect.

While we have been using letterpress in obtaining this end result, many of us are rapidly giving very serious consideration to new developments in gravure printing. New type multicolor presses are now being manufactured which will print paper or paperboard. The speaker testified that he had seen the results of several test runs and he assured his hearers that the printed results are most gratifying. It can be expected that many of the long-run production items will be changed from letterpress to the gravure process within the next year.

In the case of a blanket box, for example, there is an entirely different problem. Here we desire a softness in the printed image and therefore it is well suited to offset lithography. The image does not have the hard edges of letterpress, but it does have the soft edges and continuous over-all tones so characteristic of offset lithography.

It carries out the ideas which the artist desired to have built into the box and it properly conveys to the purchaser the softness of its contents. To state this fact in other words, "buy appeal" has been built into the blanket box and the offset-lithography method has permitted the printer to accomplish this end result.

Printing on hard surfaces. When printing on cellophane, acetate, foil, plastic sheeting or other hard materials, the ink must dry by evaporation or oxidation, as very little of its components are absorbed by the material to which the ink is applied.

Mr. Balkema asserted that he had seen these materials printed by all three of the major processes of reproduction, but that he favors the gravure and analine processes for this work. You will note that these methods impart detail and strength of color. Every demand of the artist is faithfully carried out in the production of such labels and predetermined color standards are adhered to throughout the entire run.

Printing on corrugated and solid fibreboard. When printing on corrugated and solid fibreboard, our ideas of quality are usually lowered. The die-cut blanks are printed by the letterpress process, using regular or analine inks.

In an accompanying exhibit, the speaker presented an interesting deviation from the usual corrugated type of shipping cases. The green background color was printed with a smooth metal roller and the simulated crepe background design is the result of pressure and the stringing out of the ink as the sheet is pulled away from the ink roller. The black and yellow inks also have a gloss not normally found in printed shipping cases. If this quality printing is desired, then special inks

must be used. We should note, Mr. Balkema pointed out, that a reasonable facsimile of this green background color can be obtained by printing the linerboard on a gravure press before the linerboard is placed on the corrugating machine.

It was not his intention, Mr. Balkema declared, to convey to his audience that each and every piece of printed packaging material is particularly well suited to any one printing process. Especially where solid colors are printed, it is entirely possible that any one or all of the three major processes can be used. Where such a set of conditions is encountered, then other factors such as length of run, paper or board stock which can be used with the selected process, service, delivered cost, etc., should be given due consideration. With these facts available, you should be able to select that process which will not only give you desirable packaging materials, but at the same time will permit you to fill your service requirements at a favorable cost.

Maintenance of color. Mr. Balkema stated that many suppliers assured him that they can maintain predetermined color standards by each of the three major printing processes, not only within the production run itself, but from run to run over a period of years. Unfortunately, Mr. Balkema noted, this has not been his experience and frequently he has run into trouble on color maintenance after authorizing production based upon a supplier's statement rather than his own past experience.

Gravure press production can be easily checked against color standards, as the packaging materials are delivered dry. The printing cylinders contain little wells which accurately measure definite qualities of ink and so long as the ink formula is not changed, then consistent results can be expected.

With the letterpress process, it is a little more difficult to control the maintenance of color standards. Inks can and should be checked against approved wet samples before they are put on the press. At the press, the ink fountains must be accurately set so as to feed the proper amount of ink to the plate. Too much ink will result in too dark a color, while starved ink rollers will result in too light a color. Also, a wet ink will usually dry out to another shade of the same color.

Therefore, in order to check a printed color against a color standard, you must wait for the ink to dry. This sometimes will require a few hours and at other times with other types of ink more than a day may be required. While this procedure may sound quite time consuming, in practice it is not too difficult and you can expect and should demand a reasonable maintenance of properly prepared color standards by the letterpress process.

With offset lithography, this maintenance of color standards presents quite a problem and the speaker declared that he always avoids this process where color maintenance is a prime consideration. The basic principle involved is that water and the grease ink will not mix, but in actual production there seems to be a feed-back of the water into the ink and the ink into the water. This set of conditions affects the printed colors.

As in letterpress printing, the sheets are delivered from the press with the ink wet and relatively the same time is required for the ink to dry. If you select offset lithography for the production of your packaging materials, you should allow your printer a greater color tolerance than you would allow him if he used either one of the other two major methods of reproduction.

In concluding this discussion, Mr. Balkema said he would like to leave the following thought: All four processes of printing—stencil, letterpress, planograph and intaglio—are suitable for the printing of packaging materials. Each of these processes has advantages peculiar to itself which may or may not be required in properly reproducing the art work. Frequently, more than one process can be used to obtain the same end result. By close and early cooperation between management, artist and printer, you can facilitate the selection of that printing process which will permit your packages to say "Take me home."

TUESDAY MORNING (Concurrent Session)

Chairman, DR. L. V. BURTON, *executive director, Packaging Institute, New York.*

Gearing the Package to the Sales Forecast—M. C. POLLOCK, *sales promotion manager, C. A. Swanson Sons, Omaha.* In general, our packaging before the war was confined to bulk shipping containers and our company had no contact with the consumer at any point, Mr. Pollock stated. During the war important policies were formulated by the management to harness the vast procurement power of the company in processing and merchandising products under our own label.

The designer's first move was to familiarize himself completely with our operations, personnel and method of doing business so that he would have a better conception of the company and be better able to interpret it to the public through the label.

The next step was to set up broad objectives for the redesign job. We agreed that the most important consideration in the beginning was to discover a basic color or colors which would appeal to the greatest number of women.

Having arrived at some indication of a good basic color through the sampling method, the next step was to move forward on a broader scale and we then reproduced by a silk screen hundreds of duplicates of particular color combinations and subjected these to consumer voting in homes and in food stores.

After a period of time two colors very definitely began to take the lead—a magenta shade of red and a light blue. Accordingly, we narrowed our choices down to combinations using one of these two colors as basic.

The important decision was to incorporate both of these colors into our new label format. All of the earlier designs, plus many new ones were then shuffled and incorporated on labels containing one or both of the two basic colors we had then decided to use.

Once again we went through the tedious process of checking consumers in their homes and in stores to weed out those designs.

In a short time we were able to narrow the basic designs to four combinations. At this stage we thought we had progressed sufficiently far to enter still another phase, that of sales testing and store checking.

Accordingly, we again turned to the silk-screen method and had hundreds of labels run off, using the four combinations of color and design. We actually labeled up products in New York and in Omaha. With the cooperation of two chain organizations we put the products on store shelves and stationed investigators to observe consumers as they passed the displays.

The various labels were rated both for actual purchases as well as for attention value, pick-up value and turn-down value. By this I mean we scored the labels on the basis of attracting the shopper in some very specific or definite way. If she touched the can or if she asked a question of a stock clerk about it, a point was scored. If she picked up the can an-

other point was scored and, of course, if she made a purchase, still another point was scored. On the other hand, if she picked the can up, put it down and walked away she was immediately questioned as to the reason for not making the purchase. Invariably we found that it was due to some lack of information on the label.

One particular combination appealed to us all very strongly —the Block "S" design. I have had enlargements made of photographs showing the display position in chain stores of this particular label combination on our No. 1 cans of turkey. Strangely enough, our checks indicated that this particular label did not completely measure up to other labels and it was discarded in favor of the ultimate one, although the organization was quite keen about this Block "S" combination.

While the designer was tackling the over-all job, we in Omaha proceeded to tackle each group of products separately from the standpoint of material, size, shape and physical make-up of the package.

We had conducted sufficient market research to conclude that the biggest opportunity ahead in our canning operations was in the pure meat product. In other words, the closer the end product approached fresh turkey or fresh fowl the greater the consumer acceptance.

Those few buyers who were at all interested in the products stated in no uncertain terms that glass was the only material to use. Many buyers recommended that if we did not go to glass we go to the slope-sided tin which had been traditionally used. Of course, it was obvious to us that to pack the products in glass was to continue high production costs which, in turn, had already brought about high retail prices. So we took a new tack.

We had carefully examined the history and the success of the tuna fish field and the canned meat field and felt that what had been done there might be duplicated in the chicken and turkey field. We asked 200 consumers which they would prefer at the same price—boned turkey or tuna. The answer was overwhelmingly in favor of boned turkey.

The challenge was fairly obvious. We had to find a way to produce boned turkey and boned chicken at cost low enough to permit it to be retailed at somewhere near the price of tuna fish. Since tuna fish early in 1947 was retailed at around 39¢ and since boned turkey had rarely ever been retailed at less than 70¢, you will recognize the immenseness of the problem.

While the production and technical departments were working on ways and means of increasing the yield and cutting production costs, we had a good look at the packaging problem. We found that if we could pack the turkey meat in regularly shaped tuna fish cans we could affect considerable savings in not only package material, but package production costs. Obviously, however, we would be going completely counter to what the buyers had already told us.

The next step was to prove what consumers had told us by a test. Disregarding our production cost completely, we packed several thousand cases of boned turkey in tuna fish type cans, using our current label, and ran a city-wide sales test pricing the product at 39¢. Within two weeks the stock was completely cleaned out and we proved to our satisfaction that the boned turkey would move in volume if priced right.

Meantime, the production and technical departments had made considerable progress and, in fact, had perfected the revolutionary so-called raw-boning process. Accordingly, a decision was reached to pack our boned turkey and market it at prices which would permit a retail price of 39¢ by the chains and supermarkets.

Of course, it must be remembered that while this was going on we had no outer label that would really do a selling job. Once again we had to proceed in various test markets with a label which we already knew put two strikes on the product.

In the canned goods division, then, we literally battered our way through the year market by market, proving in spite of packaging obstacles that our product, when properly priced and promoted, had definite consumer acceptance.

The entire sales organization, as well as the buyers, were literally drooling for a new, improved label. It was most discouraging to have the large national chains tell us to come in again when we had a better label.

Even though we had for many years repeated the phrase, "The package was its own best salesman," this was now driven forcefully home. Accordingly, we began to explore ways and means of utilizing the can or the label itself as a super-salesman.

Last year at this same Packaging Exposition we made preliminary inquiries on the practicability of laminating with cellulose acetate a canned goods label for high-speed production and initially received very little encouragement. The idea, of course, is not original and the continuously perfect appearance of the Wrigley package was evidence of the value of laminating. However, further work with DuPont and the Arvey Corp. indicated that under certain conditions lamination of a canned goods label might be carried on.

Strangely enough, our laminated labels feed through better and with less wastage than ordinary stock. Part of this is due to the fact that we thoroughly educated our people to the value and high cost of the new label—and, of course, the cost was quite substantial.

In most markets where we had distribution and where the old label was familiar to the consumer, the results were sensational. There was, we found, an initial period when the consumer held off, apparently being somewhat skeptical that the new product was identical to what she had been buying. Once she made up her mind, however, the action started and sales in some of these markets are running double the rate of a year ago—this in spite of the fact that both the boned turkey and the boned chicken are selling at somewhat higher prices today in comparison with a year ago.

New Opportunity in Packaged Perishable Foods—Dr. Charles W. Hauck, *Professor of Rural Economics, College of Agriculture, The Ohio State University, Columbus, Ohio.* *We know* that pre-packaging of fresh (unprocessed) fruits and vegetables is not altogether new and revolutionary. Probably no one doubts the commercial practicability of consumer packaging of cold cuts or processed meats and so-called "hardware" items such as apples, potatoes, dry onions and citrus fruits, and even tomatoes and spinach. It has been going on for a long time. Recent developments simply focus attention on the efforts now being made to extend the practice to other highly perishable foods—red meats, head lettuce, segmented cauliflower, cut slaw and many others. These are the more dramatic and spectacular adaptations that seem to some observers to be revolutionary and possibly visionary.

We know that consumer acceptance has been good, even when some premium is charged.

We know that wastes and losses are reduced. Some very severe losses accompany conventional handling of bulk produce, not packaged, not refrigerated. Studies made in this field indicate average retail losses ranging from 6.5% by weight to 10% or more, though on some items much greater losses than these are common. For example, the necessary trimming, sorting and reconditioning in conventional retail

stores has been found to result in wastes as high as 36.1 lbs. of each 100 lbs. of bunched beets received, 32.3 lbs. of cauliflower, 20.4 lbs. of head lettuce and 14.8 lbs. of broccoli.

We know that shelf life is lengthened. In tests we have made with seven vegetables at Columbus, pre-packaging and mechanical refrigeration together prolonged the salable life of these products and maintained them within 95% of the original weight for periods ranging from six to 24 days; or, in other words, from two to seven times as long as conventional handling in bulk. These results have been borne out by similar tests elsewhere and by commercial experience.

We know that turning these goods to refrigerated self service yields the usual merchandising advantages. Offering produce that is pre-weighed, pre-priced, pre-packaged, pre-labeled saves on clerk hire. It increases sales volume. It permits complete display throughout all business hours. It maintains clean and safe conditions in the produce department. It speeds traffic flow. It prevents deterioration resulting from handling and rejection of the goods by patrons. It permits brand identification and opens the way for the packer to familiarize the ultimate buyer, the consumer, with his particular product, to gain recognition and acceptance among consumers for any special merits his branded product may have and to benefit from whatever repeat demand can be inspired for it.

We know this is not just an additional burden on the costs of doing business. Costs for the most part can be offset by savings. Yet efficiency could be still further increased in every packaging operation I have seen and costs reduced correspondingly. Important technological developments in marketing rarely occur which do not at first involve higher costs than previously accepted practices. Either they overcome this initial handicap through increased volume and efficiency in operation, or consumers and producers accept them regardless of cost.

To what extent may packing-house wastes be reclaimed and utilized? Some produce discarded in the pre-packaging houses is as fresh, as appetizing, as wholesome and nutritious as that which is packed and sold. Some packers are reclaiming some of these losses in the form of cut salads, salad and soup-mix combinations, jellied fruit desserts, peeled and sliced potatoes and others. What are the long-range possibilities in this direction? After reclaiming what is suitable for human food, how much of the remainder (such things as carrot tops, stems and leaves from cauliflower, seriously damaged items, etc.) has value as animal feed or as mulches or fertilizer, either in its original condition or in dehydrated or other processed form? What part, finally, is of no value and can only be disposed of as economically as possible?

What are the effects of pre-packaging upon the nutritional values and wholesomeness and palatability of the contents? Ripe strawberries and peaches and shelled green lima beans, for example, have been observed to develop distinctly unpleasant flavors and aromas and to become inedible quickly when sealed in vaporproof transparent wrappers, unless promptly and continuously refrigerated. Anaerobic respiration taking place within the sealed packages produces different end products from those produced under normal physiological processes. This induces off flavors in the product and discoloration of the tissues, though not always followed by early decomposition. Deterioration may occur without apparent exterior evidence, remaining undetected until the package is opened.

The threat of lost consumer confidence is apparent. But the industry needs to learn whether there may be also an inherent concealed threat to the public health and if so, to learn and apply proper safeguards.

Is pre-packaging suited only to Fancy or No. 1 grades? Or can the benefits of self-service unit packaging be extended also to lower grades at lower prices?

How may molds and decays be retarded in pre-packaged perishables? Studies ought to be made of conditions in packing houses, wholesale and jobbing houses, retail stores, truck and rail transport.

How may proper quality and condition control be assured? The packer or merchant of pre-packaged fresh fruits and vegetables or meats cannot escape a greater responsibility than before. The customer is less able to judge the quality and freshness of the product at time of purchase if the merchandise is surrounded by a closed package, however transparent.

Where will pre-packaging be done in the future? Some are of the opinion that full advantages of this merchandising innovation will not be enjoyed unless and until all pre-packaging is done at the source, discarding all inedible and non-essential parts before the shipment, thus saving on containers, shipping space and weight, freight and drayage, icing charges, handling labor and expense, permitting beneficial use of trimmings on the land and reducing costs of garbage disposal in populous consuming areas. Others hold to the view that necessity for a "last look" to insure freshness on the retail counter will continue to require all pre-packaging to be done in the form of repacking in terminal markets, converting conventional wholesale shipments into closed, labeled consumer units just before delivery to retailers.

These several unknowns, Dr. Hauck pointed out, confront us with a task of some magnitude.

The varied character of the problems to be met suggests that the program would have to be farmed out to many public and private agencies in the form of sub-projects. All these would be geared into one or more master projects and thoroughly coordinated.

A job as big as this is not likely to be financed or staffed adequately nor integrated properly unless it is taken under the wing of the new Agricultural Research and Marketing Act, Dr. Hauck stated. This seems to be a perfectly proper use of public funds as contemplated by that law. As you know, the Research and Marketing Act was enacted by the Congress for the purpose of facilitating and expanding research and other services in the marketing of agricultural products, to place marketing more nearly on a par with production services to agriculture. The first annual appropriation of $9,000,000 became available less than a year ago. Many projects are now under way. A few of them are in the field of consumer packaging. Dr. Hauck suggested that these be greatly enlarged and supplemented and coordinated.

The need at the moment is for some central authority to accept responsibility for a comprehensive national undertaking of this sort.

Yet it must be the responsibility of industry to provide the needed starting force. Momentum must come from commercial interests rather than from government. Surely pre-packers and related businesses will welcome this opportunity.

Packaging for Export—WALTER H. HUSTED, *assistant manager, Claims and Insurance, Isthmian Steamship Lines, New York.* When you know that losses due to damage and pilferage, much of which are caused by improper packing, are costing American industry hundreds of millions of dollars, it is clear that something must be done about it, Mr. Husted

stated. In addition to the loses sustained by steamship companies, Mr. Husted said, it is his understanding that the records of American and Canadian railroads show an increase in loss from 1941 to 1947 of more than 500%. This is a tremendous overhead for American industry to carry if it is to compete successfully with foreign countries.

During the first year of World War II over 50% of the Signal Corps equipment shipped overseas was useless by the time it reached its destination, solely because of improper packing. The Army and Navy radically reduced these losses after the first year by a rapidly developed effective code of packing techniques and standards. The difference between that problem and this is that human lives were at stake then and now only dollars are at stake. However, hundreds of millions of dollars seem to be a sufficient incentive to do the job again.

It is probably true that shippers using insufficient containers for export shipping actually save a small percentage of their total cost, but have they stopped to weigh that small saving against the final result? Your customer wants the products you sell and wants them in good condition. If he wanted his money back on account of loss or damage, he might just as well not have ordered the goods in the first place.

When the losses are reduced, it is to be expected that the insurance rates and the freight rates will reflect the lower claim expectancy.

It appears that your first additional cost of better packing should eventually be offset by your saving in freight and insurance but, more important still, is the fact that your customer on the other side can order what he wants and be fairly sure of receiving it.

The proper marking of the container is another very important factor involved in getting goods to the customer intact. Many packages quite capable of carrying the goods safely have so many marks, numbers and trademarks that much time is lost on the part of all who handle shipments and, as a result, the package often goes astray or, at best, is greatly delayed. This is particularly true in those cases where second-hand containers are used and the previous marks and numbers are not entirely obliterated.

Those who desire to pilfer cargo do not go willy nilly about their business, but are very careful to confine their work to bring about the easiest and quickest profits. Trademarks, most certainly, have a high value, but the question is whether the result obtained from advertising on the outside of cases in transit is worth the pilferage which takes place. It would appear, Mr. Husted pointed out, that we would all save money and customers if all packages were marked only with the name and address of the consignee and such other marks and numbers as are necessary for identification.

The experienced exporter will make every effort to supply his customer with quality merchandise in strict compliance with his purchase order. He will make certain that his shipment is properly insured and he will check the customer's credit very carefully. He will also select an experienced freight forwarder to handle his documents. Unfortunately, the amount of time and thought which he will devote to the proper packing of his shipment has been far out of proportion to the other items. This problem has been all too frequently delegated to unpracticed, unequipped shipping personnel who have no concept of the importance of the packing function. It is becoming increasingly apparent that far more consideration must be given to the requirements of the foreign buyer. How long will he tolerate the American exporter whose goods periodically arrive broken or damaged?

If American shippers are to continue to develop new outlets properly for our great wealth of manufactures, they must give far more consideration to proper packing, Mr. Husted claimed.

Exporters of bulky and heavy machinery, particularly, must keep in mind that the extensive, well protected and well maintained railroads and large efficient freight cars available in this country are in no way typical of those the world over. On the contrary, virtually no port in the world is served as efficiently as ours. In normal times rail connections in Europe were good, but these are not normal times. The rolling stock of European railroads is worn out and is only in the process of being replaced. Moreover, such rolling stock is typically small, two axle cars being used where we use four axle cars. Road beds in Europe are generally not so sturdy as in this country and the rails are lighter. This same condition applies to many of the countries to which you send your goods.

Some exporters mark their goods "fragile," or "use no hooks," etc. This may be of some help in the American port of loading, but few foreign stevedores are sufficiently familiar with the English language and, as pointed out previously, if we are to mark our packages at all for the guidance of foreign stevedores, why not mark them in the language they understand?

Insurance underwriters and carriers both report an alarming rise in cargo loss and damage claims, due largely to poor packing. Then, there are some who place the blame upon the increased use of domestic-grade cartons for export shipments. Others will point to the deplorable cargo handling and storage conditions existing in most of the war-torn ports of the world and there are those who will reason that rising costs of manufacturing and services have forced the export marketer to seek the cheapest packaging to keep pace with a competitive market.

Let us consider palletizing. There is now available an expendable pallet, costing approximately 80 cents which, if used by the shipper, would certainly benefit all concerned.

The labor cost alone is worth mentioning. At the pier of discharge, the palletized packages require $12\frac{1}{2}$ man hours to discharge from the ship and stow on the pier, whereas the same quantity in loose cases requires 25 man hours. When loading on trucks at destination, the palletized lot requires $\frac{1}{2}$ man hours, whereas the loose lot requires almost 5 hours. On the final phase from trucks to the warehouse, the palletized lot requires $1\frac{1}{4}$ man hours, whereas the loose cases require almost 7 man hours. The saving in man hours accrues to the transportation companies and to the consignee and the element of waste and the retention of the customer's good will accrues to the exporter.

We have no intention of recommending that the Steamship Conferences arbitrarily set up these standards and include them in the tariffs, Mr. Husted said, but we do hope that with your assistance and encouragement we might influence some such action on the part of the Conferences. If you really want better packing and want to be sure that your competitors are meeting you on the same level, you might indicate to your various trade associations your desires. Then, if and when the Conferences take the matter up seriously, your trade associations will be in a position to assure them of your cooperation.

One final word: If Americans cannot, or will not, deliver the goods intact to our foreign customers, some foreign exporter will do it for us. Right now, the competition may

not be too great due to the inability of the foreign countries to produce sufficient goods, but the time will come and then who can blame the customer for remembering how poorly we fulfilled our obligations when we had the chance?

TUESDAY MORNING (Concurrent session)

Chairman, ALFRED B. BRACKETT, *manager, Package Research, Birds Eye-Snider Div., General Foods Corp., New York.*

The Reduction of Transportation Damage Claims—A. L. GREEN, *Assn. of American Railroads, Chicago.* Selecting as a base period, for comparison, the 10 years ended with 1942, Mr. Green said, U. S. Class I railroads spent an average of 58.2 cents of each $100 of gross freight earnings for freight loss and damage claims; for 1947, $1.70. But unless the effect of inflationary prices is deducted from the 1947 figure, the comparison has little significance. Because of the infinite variety of commodities upon which claims are paid and the time lag between date of shipping and date of payment, the influence of higher prices cannot be computed accurately. However, it seems fair to assume that average prices applicable to claims paid in the year 1947 were about 75% higher than average prices prevailing in the 10 years ended with 1942. Giving effect to that increase, the 1947 claim-to-revenue ratio would have been approximately 0.97%, or 97 cents of each $100 of gross freight revenue, which is an increase of 67% in the ratio over the base period. Applied to claims paid in 1948, at present price levels, the increase in the average claim payment attributable to higher values would be about 100% over the base period 1933 to 1942.

Nevertheless, making full allowance for every factor beyond carriers' control, the claim payment of an estimated $120 million for the year 1947 is a very large increase over the average of $19,567,046 for the 10 years ended with 1942. Even in these days, $120 million is no inconsiderable sum. It is equivalent to one-fourth of all the net earnings of all the railroads in 1947 and every railroad officer, from the president down, is deeply concerned about this situation.

In a large way the problem is a legacy of the war. In part it comes from disruption of experienced forces of shippers, shipping-supply manufacturers and carriers. Partly, it stems from a deterioration of shipping containers.

What does the service-rehabilitation program of the carriers look like? First, and closely linked to the Assn. of American Railroads' freight claim division are eight regional freight claim conferences, composed of claim officers of individual carriers, which meet periodically to discuss service and claim-causing problems common to the railroads. A main function of the claim conference is to originate, gather, distribute and promote the use of information of claim causes and their prevention.

Each conference has a loss and damage prevention committee. Questions of wider than local or regional experience are referred to the freight claim division's National Freight Loss and Damage Prevention Committee, composed of prevention officers selected territorially from 14 railroads and the Railway Express Agency.

The Division's headquarters acts as a clearing house for receiving and circulating among carriers, receivers, shippers, shipping container manufacturers, trade associations and others material designed to increase the effectiveness of the prevention effort. Traveling representatives of the division experienced in this work investigate in the field a great variety of conditions resulting in claims or unsatisfactory service, develop practices making for improvement, confer with industry and carrier representatives and make themselves generally useful to the national program.

Monthly reports of claim payments are furnished to the Freight Claim Division by member carriers, classified into chief causes and commodities. These reports are consolidated and printed semi-annally to assist carriers, classification committees and shippers in determining where the main corrective effort should be directed from an over-all standpoint.

For the investigation and promotion along educational lines of the best standard practices in packaging, handling and loading of freight, the association also maintains a Freight Loading and Container Section. Engineers employed by the section, after field observations and consultation with shippers and others interested, prepare illustrated pamphlets covering packaging and loading methods in keeping with best standards.

A Freight Station Section of the Assn. of American Railroads also contributes effectively to claim prevention through freight-handling improvements, including greatly expanded use of mechanized equipment. Local associations of agents in principal cities, linked to the parent organization, meet regularly to exchange ideas for doing the job more economically and to the greater satisfaction of the shipper.

Since the first World War and especially in recent years, police protection of railroad property and goods in transit has vastly improved.

If there is any part of the prevention job that the weighing and inspection bureaus are not in up to their necks, it cannot be recalled now. These bureaus apply the Mullen or bursting test to fibre boxes, advising shipper and box maker whether boxes meet the requirements of the Consolidated Freight Classification. If they do not comply, shippers know that rate penalties are in order. If the box is of better test and workmanship than that guaranteed in the box-maker's certificate, the shipper knows he is getting a good deal from his box supplier; i.e., so far as a bursting test is a criterion of quality. Whether policing of the rules on fibre boxes by the bureaus is an important safeguard against package failures due to substandard quality can be judged from the fact that somewhere around 85% of all merchandise is packed in the fibre box. These tests show a marked improvement in the fibre box in the last few months; but there is still a great deal of damage, running into many millions of dollars annually, due apparently to boxes and inner fittings of inferior quality.

The records of the inspection bueaus (and of the railroads, too) furnish a resounding answer to the question asked by shippers so often, "why don't you refuse improperly packed shipments?" Gentlemen, shippers are our customers. The policy of the railroads is to give their customers every consideration. Poorly packed or incorrectly packed shipments are not arbitrarily refused. When such are discovered, however, the shipper is courteously informed of the condition and asked if he wants to take the goods back so his customer will be spared the disappointment of a damaged shipment.

Probably of greater effectiveness than all carrier-group activities put together is the prevention work done by the individual railroad on its own line. That is where the effects of improper packing, marking, loading, etc., are seen and, in the case of switching, sometimes heard. No railroad can be said to have the "best plan" for producing trouble-free service, nor do any two railroads proceed along exactly the same lines. All are alert to the need for knocking out claim causes wherever they stick their heads up. Each road has a specially equipped staff headed by the freight claim agent or an officer responsible for prevention activities. Where the volume of

business warrants, men trained in the best packaging and shipping practices, as well as the proper handling of freight and cars, are stationed at stragetic points, often being responsible for results on a division or a grand operating division of the road. Other experts travel out of the main office. Their duties include everything that contributes to good or bad service.

Excessive switching impact is one of the main causes of damage. Realizing that proper, skillful switching is a result of method, training and supervision, the prevention and operating departments are giving a great deal of attention to all phases of the switching problem. Illustrated folders and posters aimed at raising morale and skill, pocket speed cards explaining how coupling speed can be judged more accurately, speed tests, careful switching committees who visit yards and discuss the matter with the men, and other measures are followed to impress upon engineers, switchmen and yardmasters that they have a great deal at stake, personally, in running a good railroad.

In addition to the training of yardmen, approximately 1,000 impact recorders are used by carriers to register the degree of impact shock that enters car and contents in switching and train operations. Time and location of shock is revealed by a tape synchronized to a clock. When the tape shows damaging impacts the crew responsible is identified and corrective action is taken. Where over-speed impacts occur repeatedly in certain yards, the operating department concentrates remedial effort upon such points.

Over, short and damage reports are studied, analyzed and tabulated to disclose the commodities, handling and stowage practices resulting in heaviest claim losses. A number of railroads record their claim payments to produce a current record of the claim-cost per car originating with each principal shipper on the line. Where high claim rates develop, a practical man or a container engineer visits the shipper to lend assistance in solving the problem.

Some roads appoint committees of interested departments which tour the entire railroad, investigating, discussing and reporting on all features of the operation bearing upon cause and prevention. Team play is emphasized and directly resulting from this approach claim reductions can be shown.

Warehousing for Profit—JOHN D. SHEAHAN, *Drake, Startzman, Sheahan, Barclay, Inc., New York.* Manufacturing is so interlaced with warehousing problems that factory efficiency depends in large part on sound warehouse planning Mr. Sheahan said. All materials—raw, semi-finished, finished—must be stored except when they are actually being processed or handled. Thus the planning of warehousing—of the amount of space needed and the locations to be used—is an integral part of production.

The first step in the planning of warehousing requirements is a decision on what level of stock—whether raw materials, semi-finished products or finished products—is to be maintained at any location. Sound warehousing principles must be applied to the accommodation of this stock level, whether it is to serve a production line or a market.

To compute warehousing space requirements or facilities, it is necessary to begin with a forecast of sales. This estimate must be sufficiently detailed to permit a computation of the physical size of the stock of each item, whether a raw material, a component or a finished product.

In cases where such an estimate proves too low and additional space is not available, warehousing can sometimes be managed by a reduction of the stock level in terms of days of supply. In other words, the size of the stock would not be changed, but it will serve production or the market for a shorter period of time. When a level is lowered, however, the control of inventory must be correspondingly tightened.

Sales estimates should be related to the stock level for each item on the bills of materials and in the finished products line. Estimates should then be translated into cubic feet and net square feet of warehouse requirements. The conversion of cubic feet to square feet should take into consideration such building characteristics as ceiling heights and floor loads.

Experience statistics on the range of stock variation both above and below this level are of primary importance. Warehouse space must be planned to accommodate not the average stock which is anticipated, but the maximum stock which may reasonably be expected to be on hand at any one time. This experience data should reflect production policy, seasonal sales variations and the degree of sensitivity of the inventory control system.

The net square footage required to stock the desired level should then be increased by the percentage of variation which available statistics indicate must be anticipated. Frequently, however, this requirement may be tempered by a better system of inventory control or adjusted to allow for an altered policy relationship between purchase of raw materials or components and production, or between production and sales. It will be found that sound warehouse planning can be projected no further into the future than sales can be reliably forecast.

Any computation of warehouse requirements must recognize special conditions which are important. The first is a requirement for bin and shelf stock. The second is the need for a sample or model stock established to expedite shipment and reduce order-filling time. Computation of proper bin sizes is a science in itself and is worthy of detailed study. Precision development of bin sizes can yield substantial benefits in the form of reductions in floor area needed. Planning should follow the same procedure as for the bulk or reserve stock; the same principles should be observed.

The computation of aisle space needed to serve the net warehouse area is generally controlled by three factors: (1) the materials handling equipment which is to be employed, (2) the volume of traffic anticipated in each area and (3) lot sizes to be stocked in terms of cubic and net square feet.

The type of materials handling equipment to be used will usually determine the width of aisles. This must, however, be tempered by the traffic requirements for the passing of materials handling equipment. One-way traffic aisles are frequently installed to reduce aisle widths.

The number and length of aisles will depend on a breakdown or classification of the material to be stored. This breakdown of lot size should be computed on the basis of cubic feet and square feet required for the established level of each item. If warehousing is planned in unit or pallet loads, it will often be convenient to compute the stock level of each item in terms of such loads. This consideration of lot sizes is imperative if the warehouse space is to be tailored to fit the characteristics of the stock. In addition, allowances must be made for the maximum percentage variation anticipated which was developed in connection with the computation of net warehouse area.

Most plants encounter their greatest warehousing difficulty in accommodating small or odd lots. They frequently waste great expanses of floor area in providing accessibility to those lots. Usually the use of racks or box pallets will solve this problem and permit full use of overhead space. In some cases, racks can be built to accommodate pallets so that a

number of lots may be stored in one tier, each immediately accessible. Some well-managed plants accommodate these small lots by reserving two of the four warehousing directions in the "islands" for them. Whenever possible, an item should be stored in more than one row, both to permit stock rotation (use of oldest material first) and to allow for faster release of unused warehousing space.

Generally speaking, bulk storage space should never be specifically allocated or reserved for the entire stock of an item. It may be desirable, however, to reserve a given area for a certain type or classification of stock. This principle does not apply to bin warehousing or a sample stock established for selection purposes. In the latter case, the placement of specific items should be under continual review to detect changes in item frequency factors.

The location of the various items in a warehouse—whether raw, semi-finished or finished products—is extremely important from the standpoint of handling costs. The objective is to reduce the travel distance of items in greatest demand. They should be placed near the point of use or shipment. A simple test for placement efficiency is to plot the travel or flow of these items from point of receipt to warehouse area to point of use or shipment should be as close as possible to a straight line.

Many companies are taking a step towards better management which I think all companies should consider. They are concentrating all responsibility for physical distribution operations, warehousing, materials handling, traffic management, packing and packaging, stock records and control of stock in the hands of one top level executive. This man, whom we may call "Director of Physical Distribution," has an over-all view of the distribution operations of his company. He has the authority to push through changes needed to bring those operations to peak efficiency. He has a voice in the policy councils of the company. In this way he is able to bring major distribution problems to the attention of all top management executives and to integrate physical distribution with the other major functions of the business.

Determination and Use of Cushioning Materials—S. L. SWENSON, *product engineer, Kimberly-Clark Corp., Neenah, Wis.* A question often posed and seldom answered with any degree of assurance and accuracy, said Mr. Swenson, is: "What is the correct thickness of a cushioning material to protect my product adequately from damage from shock loads?" Surprising to many packers, this question *can* be answered with a fair degree of accuracy *provided* that certain facts about the product are already known. For example, we must know:

1. What is the shock which will break the product. This is measured by and called its "g" or "gravity" factor—the number of times the force of gravity which will break the item. In other words, the "g" factor is the index of *fragility* of the product.

2. The shock loads which are to be imposed on the product. Must it withstand a 2-ft. or a 20-ft. fall to a concrete floor? What is the treatment the product will be subjected to en route?—in *definite* terms.

Having the "g" factor and height of fall to which the product might be subjected, it is possible to refer to tabulated data and determine with reasonable accuracy the correct thickness of any one of a number of common cushioning materials which will do a satisfactory cushioning job. Report No. R-1627 "Application of the Properties of Cushioning Materials in the Design of Cushions," Sept., 1946, by K. Q. Kellicutt, technologist of the Forest Products Laboratory, Madison, Wis., outlines this method of determining cushioning requirements.

Now, I wager to say that there are not 2% of the people in the audience who could come forward at this time and quote the "g" or breaking factor of the product you buy or represent! About the only people who can, are a few of the electron tube manufacturers and some of the aircraft instrument people. Yet, undoubtedly the firms represented here today package and ship millions of dollars worth of merchandise, much of which is subject to—and perhaps *suffering from*—breakage or other kinds of shipping damage. It is a known fact, too, that many kinds of merchandise are most difficult to test in respect to their "g" factor. Such items as furniture, appliances, confectionery, flowers, etc. present many variables which make the determination of safe "g" factors a painstaking process.

All of this preceding discussion points toward only one thing—the need of the majority of present day packers for a more *direct and practical approach* to their cushioning problem!

All cushioning problems can be broken down into one or a combination of the following four basic categories:

1. Bracing
2. Blocking
3. Flotation
4. Finish protection

Besides the four fundamental cushioning methods just outlined, there occasionally are other considerations demanded of a cushioning material which must be satisfied. Special functions, highly important in some packaging applications, are those of absorption and insulation.

An absorption pack is a specialized method of interior packaging designed for cushioning the fragile container of a liquid in shipment. The desired results are adequate protective cushioning against the shock (wrap is usually a flotation pack method) *plus* rapid and thorough absorption of the liquid in case of breakage or leakage at the closure. Only a few cushioning materials are produced having the special properties required to do a creditable job of absorbent packaging. Among these are creped cellulose wadding, absorbent cotton and sawdust.

Insulation is rapidly becoming a quality much sought after by many cushioning material users—particularly those packing and shipping such items as freshly cut flowers, frozen foods, fish, candy, etc. Much of the increased quantity of perishable items being shipped by air and railway express is being cushion wrapped by a material which is also—and perhaps *primarily* so—a good insulator against extremes in temperature. As a general rule, most of the commercial cushioning materials on the market are fairly good insulants.

Undoubtedly, you are all interested in what's new in cushioning, as well as what's new in packaging. What kind of developments and interesting cushioned packages are coming to the forefront and establishing themselves as contenders for "best package" recognition? Some of these new ideas in cushioned packs incorporate so many advantages over the old, slow, wasteful ways of doing things that many of the industries here represented are quickly taking hold of the ideas and following them through.

1. *Lined bags* are becoming increasingly important in the cushioning field because of their versatility, saving in packaging room labor and attractive appearance. Lined bags are much like the ordinary kraft or tissue bag you are familiar with, except that the inner surfaces are laminated with creped cellulose wadding, felted cotton or other non-abrasive material. These bags in many sizes and shapes are finding widespread application for silverware, plastics and giftware.

2. The *Cush-On Strap* has been on the market for somewhat over a year now. It is a conventional steel strap faced on one side with a padding made of creped cellulose wadding. It is treated and applied like ordinary metal strapping—except that it is not necessary to apply padding below the strap—it's already there! This last year has seen some of our larger domestic-appliance people take on the strapping and find it most successful for their purposes.

3. *Apple packing* using sheets of creped cellulose wadding or macerated newsprint pads as cushioning between layers of apples or as tops and bottom pads in conventional apple packs is now under way in full scale operations in some of our Eastern packing houses. The Washington State Apple Commission on the West Coast has just completed a series of tests indicating a 50% reduction in serious bruising of apples through the use of inter-layer creped cellulose wadding cushioning. And this kind of cushioning costs the packer only several cents per box. The result in improved value of the fruit to the packer, the dealer and the consumer is many times the added cost of the cushioning.

4. The *Hat-Jama* is a novel cushioning application which has recently gained widespread acceptance in the hat packing field. The trademarked "Hat-Jama's" and similiar items made of creped cellulose wadding are used to cushion hats when stacked together. A specially die-cut sheet of thin cushioning is placed over each hat before nesting the hat placed on top of it. Objectionable "ringing" of hat crowns is prevented.

5. *Insulated flower packs*, while not new, because of their success are gaining rapidly in popularity particularly with West Coast florists. Both wholesale and retail operators now are acclaiming the results they are attaining with insulated packs. It is now possible to deliver during any time of the year freshly cut Hawaiian or California flowers to any part of the United States upon 36 hrs. notice. And in addition, these same flowers are guaranteed to stay fresh for an additional four days!

6. *Furniture* is mentioned here because at the moment the entire furniture packaging field is in a transition stage embodying many new cushioning applications. Spurred on by the recent institution of rigid railroad packing specifications, the furniture field is now one of the country's largest markets for cushioning materials.

WEDNESDAY MORNING

Shipping Container Clinic

Chairman, W. R. HUMMEL, *methods supervisor, Western Electric Co., New York, assisted by* ALLEN C. BEARDSELL, *Merchandise Methods and Results, Western Electric Co.*

MR. HUMMEL: The importance of packaging to American industry may be roughly measured by the freight revenue for goods transported in the United States in 1946—$6,200,000,000.

For every hundred dollars of freight revenue, in 1946, a dollar and a half went to the payment of loss and damage claims. These disasters in packaging cost American industry $94,000,000.

These are merely the cold economic facts. They do not take into account many elements of packaging with which we are familiar and with which through necessity industry as a whole is becoming increasingly familiar. These elements represent the fundamental part, the new ideas and better techniques that packaging plays in shipping cost reduction, in selling products and in bringing cheaper distribution and thus increasing economic production in American industry.

To demonstrate the vast and variegated influence of packaging in an industry, we have the pleasure of presenting today some facts and highlights on the job of packaging as it relates to the Bell System. The Bell System, as it happens, illustrates perhaps better than most other organizations the influence of good packaging in industry because, as we shall show, it requires a greater variety and bulk of packaging industrial goods than perhaps any other single industrial enterprise.

First, it might be of interest to outline briefly the nature and economic characteristics of this organization. The Bell System is an $8,000,000,000 enterprise, operating in 48 states, whose business it is to furnish telephone service as efficiently and at as reasonable a cost as possible. It is owned by more than 725,000 people from every walk of life, through the cities, towns and countryside of America, and more than 650,000 people work for it. Its physical assets alone amount to over $7,000,000,000.

To make and supply its equipment is the principal job of the Western Electric Co. The nature of this equipment may give you some idea of the comprehensiveness of the products we must manufacture or secure from outside sources and thus something of the importance and variety of our packaging operations.

The Western Electric Co. produced or purchased over $900,000,000 of equipment for the Bell System last year. This equipment ranged from miniature vacuum tubes to designs especially influenced by the necessity for packaging and to withstand breakage to one-ton crossbar panels; from intricate electronic devices to giant cables. Most of these products were made in our three major plants, located in Chicago, Baltimore and Kearny, N. J. But over $200,000,000 of the material which we supplied to the Bell System was produced, much of it to Bell System specifications and standards, by over 12,000 other suppliers, covering a substantial cross section of American industry.

Most of this material must be packaged and delivered to our 29 strategically placed distributing houses, or to installation projects throughout the nation. In addition, a great many of these items produced and purchased for the Bell System by Western Electric are returned to our distributing houses for repair and recovery by the telephone companies. They, of course, must again be packaged and packed.

Waste is not tolerated in the system. Everything produced must be of unusually high quality standards; economical production and distribution costs must be realized. This philosophy applies with full force to packaging activities.

Packaging functions and responsibilities in Western Electric are within the province of two major organizations. Most preliminary packaging is designed and applied by the manufacturing division. By preliminary packaging or pre-packing, we refer to packaging applied prior to the final shipping container. The packaging design group handling this phase of the job reports to the engineering organization at each manufacturing location—that is, in our big plants and their satellites.

All final packing design is performed and applied by the telephone division, which is responsible for the distribution of telephone products. The functional responsibility for both preliminary and final package design rests with the telephone division's packing methods group. In addition to designing final shipping containers, this group also approves all preliminary packing layouts before they are made effective in the manufacturing division.

Chief activities of our packing methods group are conducted

at our plants at Hawthorne, Chicago, Kearny, Winston-Salem and Burlington, N. C., and Allentown, Pa., and at two subsidiaries, the Teletype Corp. and the Nassau Smelting & Refining Co.

Here the local packing methods groups develop and put into operation the packaging and packing arrangements for the products manufactured at these plants and their satellite locations. These groups are key groups and they do the bulk of the important packaging design jobs day in and day out.

Helping these key operating groups at each plant location is a staff coordinated packaging methods group at headquarters, 195 Broadway, New York.

Some people may wonder how it is possible to do any packing in an office building in lower Manhattan. It is the business of this group, however, to assist in coordinating company-wide packing programs, particularly where more than one location is concerned or where company policy is involved. General routines and procedures are established, new ideas in materials and equipment are studied to improve service to the telephone companies and our other customers, and to lower the cost of the distribution of our products.

Also this headquarters group develops packaging and packing procedures for all items purchased from outside sources of supply, regardless of whether they are Bell System specification or commercial items. Furthermore, this group prepares the packing specifications, both preliminary and final, which are used in packing material returned by the telephone companies to the 29 distributing houses for repair and re-use. It can therefore be seen that the far-flung packaging and packing activities of Western Electric are carefully coordinated and planned in an attempt to secure the greatest economy and dispatch in this vital merchandising factor throughout the system.

As we have pointed out, Western Electric sales to the Bell System last year amounted to more than $900,000,000. To pack this volume requires a large expenditure for labor and materials. Furthermore, the nature and variety of the products which we must pack increases the complexity and the essentialness of the packing design work. Because these products must arrive at destination ready for installation, we must spare no effort or pains to see that they are correctly packed at the source of supply.

Much of the telephone equipment produced for the system is especially engineered for a specific use at a location at which it will be installed. We cannot take a chance on its arriving at the destination damaged, because that may delay installation which in turn may delay the furnishing of service to subscribers. In the case of fire or some emergency, it may postpone the restoration of service in the affected area. Thus it is of prime importance that our equipment be packed so that it will arrive at its destination ready to be put to work. No skill in workmanship, no care lavished on an intricate crossbar switching mechanism urgently needed in a heavy service area will avail if it does not function on arrrival due to faulty packing.

Perhaps this will give you a clue to the intense interest in proper packaging and to its importance in our business. So packing methods organization is a vital element in our business. We have more than 130,000 people working for Western Electric. Of these, about 50 are working on packing methods groups in the main plants and in their satellites and at headquarters.

The extremely low claim cost is one measure of their skill in performing their job. This may surprise you. Last year, our claims costs, including unpackaged as well as packaged products—that is, losses, shortages, damages and so forth, by truck, rail, plane and all other forms of transportation—totalled around $265,000, less than $^3/_{100}$ of 1% of our sales.

Another measure is the number of packing designs that we have produced in the last few years, which may show how thoroughly the company experiments to improve its packaging arrangements. Since the war we have on file a record of over 10,000 different new and changed boxes and package designs.

Some idea of the magnitude of our operations is indicated by the requirements of our box shops at two of our major works, Hawthorne and Kearny, which are currently manufacturing more than 10,000 cleated boxes a week and in 1948 to produce these boxes will use about 6,800,000 sq. ft. of lumber; 6,000,000 ft. of solid fibreboard; 11,800,000 ft. of plywood and about 500,000 lbs. of nails. In addition, thousands of corrugated and other shipping containers, as well as many types of interior containers, are purchased from suppliers for use at all of our locations.

It is in the variety of packaging problems that confronts our group that we may find material of major interest to you. Besides the more than 40,000 different designs of apparatus and equipment we manufacture, we are required to perform a packing methods job on the outside purchases we make for the Bell System.

This is an extremely complex operation, inasmuch as we are dealing here with a remarkably wide range of products requiring almost every conceivable type of container. Mention of just a few of the classes of these products secured from outside sources will perhaps illustrate this fact.

We must arrange for packaging and loading of automotive bodies and accessories, medical supplies, ceramic and glass products such as clay conduit and glass insulators, chinaware, telephone poles, electrical equipment, textiles, paints and varnishes, cake and liquid soap, floor wax and cleaners, pure lead pipe, brooms and brushes, hardware, tools and practically every other product that you may care to mention. It would probably be easier to list the products which we do not buy and package than those that we do buy and package.

Detailed packing and marking procedures are also incorporated as part of purchasing contracts in purchasing from outside sources. Thus, procedures and methods, together with examples of some of the packaging problems and exhibits of some of our more important designs, will constitute a large part of the material to be presented before you in this clinic.

Following this introductory talk, we shall present for your information a series of demonstrations by Mr. Beardsell of our group on styles of containers and their applications.

J. M. Enslie of our headquarters packaging groups and I. R. Hogancamp of our Kearny packing methods department will assist Mr. Beardsell.

You may notice that a handbook has been prepared for your convenience in taking notes, if you should so wish, and in preserving some of the material of this clinic. (*Editors note:* Handbooks with line diagrams of containers demonstrated were distributed at the door to each person attending the clinic.)

May I say that we feel it a real pleasure to give you this demonstration and to show these exhibits to you. (As the curtain went up, there was dramatically revealed an extensive container display by Western Electric.)

Mr. Beardsell is going to take over for the next 30 minutes and demonstrate the interior details.

MR. BEARDSELL: As you will see by the title of the booklet which we have distributed, we are going to talk about "Styles of containers and interior packing details and

CONSUMER PANEL, (left to right) Lee Hickox, Mrs. L. A. Wood, E. A. Throckmorton, James H. Nash and James M. Vicary. Dr. Lawrence V. Burton, substituting for Milton E. Parker who was unable to appear, is not shown in the photo.

their respective applications." This is a rather highly specialized and technical subject.

There are no textbooks on the subject and most of the knowledge is to be gained by practical experience. It is a subject which is learned rather than taught.

We have prepared outline drawings of the fundamental styles and designs. These do not by any means cover the entire range of styles and types of details, as there are literally thousands of adaptations, combinations and modifications of the ones listed. We plan to run through the containers styles first and then proceed with the discussion of the interior packing pieces in the same order that they appear in your booklet.

(*Editor's note:* Mr. Beardsall described in detail the various styles of containers and their applications, covering 20 types of fiberboard boxes, 11 types of cleated boxes and about 20 common types of interior packing pieces. Simultaneously, Mr. Enslie and Mr. Hogancamp demonstrated the features of each on the stage. Further detail of Western Electric packing methods was illustrated by a series of 70 slides. After the demonstration the audience was invited to the stage to examine the exhibits, where several Western Electric packaging men were available to answer questions.)

THURSDAY MORNING

Chairman, E. A. THROCKMORTON, *president, Container Laboratories, Inc., Chicago and vice president in charge of the Packaging Division, American Management Assn.*

Consumer Packaging Clinic—Panel discussion by MRS. L. A. WOOD, *Prairie View, Ill. (housewife)*; JAMES H. NASH, *New York (package designer)*; JAMES M. VICARY, *New York (psychologist)*; LEE HICKOX, *Container Laboratories, Inc., (research) and* DR. LAWRENCE V. BURTON, *Packaging Institute, New York (food technologist)*. In introducing the panel members Mr. Throckmorton explained that they represented different views on the consumer packaging problem. He emphasized that the panel members, who spent a day or two in a typical medium sized food store filming packages on the shelves, had not done a fact-finding survey and that no package information was sought by them except what was visible or available in the store.

Millions of dollars have been spent to create consumer recognition of brands in all fields, Mr. Nash pointed out. Yet, he added, if you remove the company name from a package and get down to the fundamentals of some of the older trademarks, you will find that the abstract shapes, such as bands, squares, stars, etc., are commonly used. These abstract shapes do not have quick public recognition. There are thousands of these shapes used as trademarks and as such they have few other distinguishing features. Mr. Nash's belief was that a good trademark does not depend on a particular color for consumer recognition, because with the number of self-service stores, the package becomes the focal point of all advertising and hence, must reproduce well in black and white in addition to being identifiable by words over the radio. The fundamental features that make a good shelf-display package are equally possible in black and white advertising and can be described by words on the radio. One of the means for accomplishing consumer recognition of a package which is the same size and shape as a competitor's is through a design that optically alters its size and shape.

Mr. Nash added that design principles have developed to break up the natural pattern of the store, which also attracts attention to the package and holds the consumer's interest. In discussing the part the package must play in instructing the consumer on the proper use of products, particularly in the case of new products, Mr. Nash emphasized the use of the sides and back of a package. This is veritable free space for the manufacturer. Good use of available space on packages has proved to be a forceful selling medium. Most firms are making an effort to improve the selling power of their packages, he said, but it is still surprising that an advertising man will sweat blood over the copy to be used in a one-time advertisement and overlook the very valuable copy space on the sides and back of a package. According to Mr. Nash, it costs $2.50 per 1,000 for the backs of a 50-lb. flour bag printed in two colors to be delivered to the home and yet he couldn't get anybody to write the copy for them.

Dr. Burton, substituting for Milton E. Parker of the Illinois Institute of Technology, who was unable to appear, presented the viewpoint of the food technologist. He said that the results obtained by food technologists are seldom

clearly visible unless the packages are improper from the standpoint of the technological properties of the food. One of the projects of the regional laboratories of the Bureau of Industrial and Agricultural Chemistry of the Department of Agriculture is to be a study of the properties of foods to determine what the package must be. The objective that food technologists strive for is that of protecting the product from regaining moisture or from losing moisture, from recontamination by and resistance against insects. The package must sometimes protect the container from the product, as in the case of canned asparagus. Packaging must also protect products from change, like vacuum packing of coffee. The work of the food technologist, Dr. Burton concluded, is that of prolonging the selling life of a package and he may permit a change of package that is economically more feasible, but he wants it right.

Mr. Vicary, consulting psychologist, started by saying that pictures in people's minds are ultimately more important than what is printed on the package. When the customer takes your package in her hand, she sees and experiences it as a single unit and on that basis it is either a sale or it is no sale. As an example of this, he told of turning a frozen food carton inside out and handing it to some people and asking them, "What comes in a package like this?" All but one person answered, "Frozen food." The wax paper and the size of the carton had so well established themselves in this case that the bulk of the impression was in their minds.

There are two places where a package can be—either on the shelf where the grocer put it or in the minds of potential customers. If what is in the minds of customers coincides with the actual package then, Mr. Vicary said, you have a good package. If it does not, the package is not doing its job.

Psychological terminology for the total impression in one's mind is *gestalt* and in the *gestalt* theory the whole impression is the organization and interrelation of individual parts which create something unique. The *gestalt* of merchandise is essentially three things: the physical attributes—size, shape, weight, color, odor, etc.; the name—which might be a brand, trademark, manufacturer's name or description of the product; the price. Until the product brings forth this entire *gestalt* in the customers' minds, there is not a chance for a sale, according to Mr. Vicary.

Concerning packaging research, Mr. Hickox mentioned three principal factors which seem to be influencing packaging trends, particularly in food packaging.

Market and product diversification and development within the package-design industry have complicated today's packaging problems. New packaging materials and new applications for old materials have found applications and have broadened markets. New manufacturing techniques and machines have been adopted in the package supply industry. New methods for using packages in the processor's plant have been developed.

The product of research activity within the food processing industry has created some of the more complex packaging problems for technical personnel in the packaging industry. New food products, such as prepared mixes, soluble beverages, etc., require better protective packaging than ever before. Moisture-content stabilization, exclusion of oxygen, vitamin retention, lack of grease absorption, exclusion of insects and the separation of dissimilar components within a master package were cited by Mr. Hickox as some of the research problems in the packaging industry.

Finally, the changes in merchandising practices have combined to exert considerable influence on today's packaging. Self-service stores have required unit packages for many products not usually displayed in this manner. Mr. Hickox commented that with a return to competitive marketing conditions new emphasis has been placed on both package design and consumer likes and dislikes. Mechanical arrangements for displaying packages are being perfected and may compel package changes not yet anticipated. The alert package manufacturer and his customer recognize that packaging is constantly changing because of three factors—diversification of materials and development of new markets, methods and machines within the package-supplying industry; the development and introduction of new products; changes in merchandising practices. It must be realized that a sound packaging policy is one which is constantly studied, reviewed and adapted to the current trends.

Mrs. Wood, who represented the housewife and consumer viewpoint, told how the panel chose the food store owned and operated by E. J. Lindl in Barrington, Ill., as a typical semi-self-service grocery store which carried the national brands usually found in all types of food stores. She outlined the different techniques used in the package clinic tests. One was the optical technique introduced by Dr. E. H. Scovill of Joseph E. Seagram & Sons, Inc., where two or more packages are placed together in a box at a laboratory. By means of light control the packages are viewed for short intervals of time to create what is known as tachiscopic measurement. If two packages are viewed side by side, some valuable indications of quick recognition or quick legibility are produced.

Another technique is the shadow box in which packages are shown in darkness and then with gradually increasing light to determine the package most visible under identical conditions. The third technique is to view the packages in the laboratory through a lens which puts them completely out of focus. As the focus is gradually improved to clarity, the observer is asked to note which package becomes legible to him most quickly. The theory behind this is that the eyes focus only upon one object at a time and a package, to have display appeal, must perform this most important function when it is not being directly looked at.

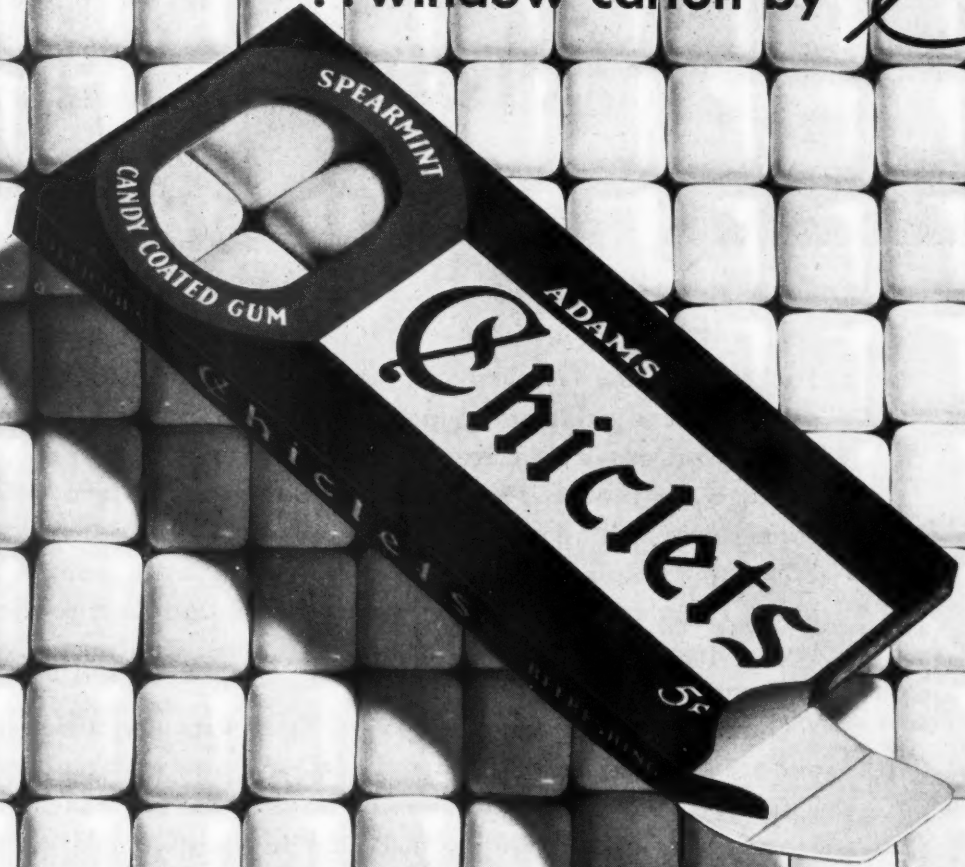
Kodachrome transparencies were then shown, blown up on a 9- by 12-ft. screen on the stage, using these laboratory techniques. Later were shown photographs taken in the store where the camera, using the same techniques, caught the packages as they were displayed. Cards were handed out to the audience so they could participate by noting reactions as some of the pictures were flashed on the screen.

Comments by the panel members as the packages were shown ranged from damaged packages and their effect on the shopper—who usually rejected them in favor of perfect packages— to the effectiveness of white as a color which could gain attention at a quick glance. Mrs. Woods noted the absence of convenient opening devices and expressed her approval of pouring spouts used on some packages. She indicated her dislike of some types of lids and shapes of bottles because of the difficulty of opening and emptying them. Mr. Vicary pointed out how displays of packages aided in the establishment of a *gestalt*.

The use of package tops for pricing spots or advertising, particularly on glass bottles, was mentioned by Mr. Nash as a part of the package not utilized in many instances which could be. Dr. Burton emphasized that firms have sometimes found what they thought were packaging problems often turned out to be processing problems as in the case of cheeses and prepared mixes.

The gum by **AMERICAN CHICLE**

. . window carton by *Burt*



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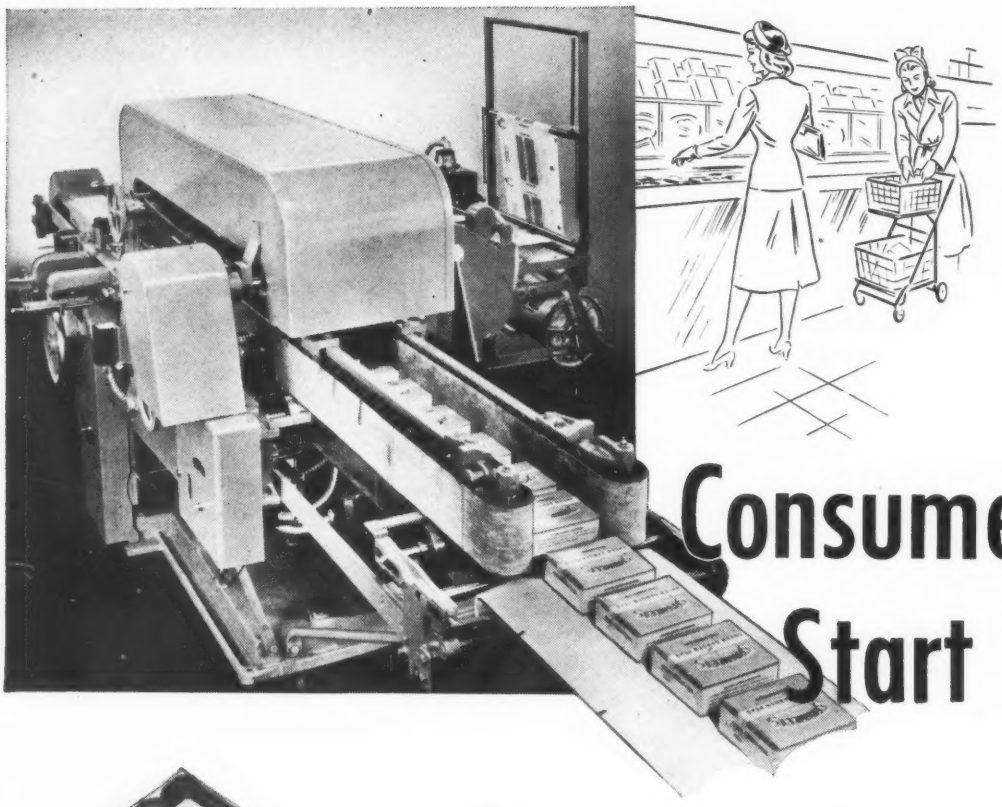

Consumer Sales Start HERE

Packaging — the last step in production — is the first step in sales. Dealers give a smart-looking, eye-catching package preferred positions in their stores. Shoppers are attracted by such a package . . . choose it in preference to competing items. Sales come easier. Selling costs go down.

Machine wrapping offers the widest scope in package improvement. There are, today, so many attractive and product-protecting wrapping materials available. And they all lend themselves to beautiful color printing.

Our machines are adaptable to virtually all wrapping materials, and are suited to the requirements of a great variety of products. This, plus their modern, cost-saving features, has made them the most widely used wrapping machines in the packaged goods field.

Why not check with us to see if your present package can be improved, or your costs reduced?

Write for our booklet "Sales Winning Packages"

PACKAGE MACHINERY COMPANY

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POLYISOBUTYLENE IN WAXES

Concentrates offer greater stability and generally improved properties for both paraffin and microcrystalline wax blends.

By WILLIAM L. ABRAMOWITZ*

In his day Mark Twain was probably right that "Everybody talks about the weather but nobody does anything about it." Today it is quite different. We manufacture weather indoors and then design wrappers to resist artificial weather conditions as well as natural atmospheric conditions(1).[1] Humidity is a major source of most packaging troubles and these troubles vary with location. The United States Weather Bureau statistics (2) covering nearly 25 years show that this difference in humidity fluctuates 10 to 35% at a given location each day. With seasonal changes it is even more diverse. For example, in Chicago the annual range in humidity is from 67 to 84%; in El Paso, 12 to 70%; in Spokane, 25 to 88%.

Because of these humidity changes, geographical location obviously influences the keeping qualities of packaged goods. Numerous investigations have been carried out to correlate moisture content of products with humidity. One of the most extensive studies is that reported by R. E. Wilson and co-workers(3). From their data, Fig. 1 was prepared to show the moisture content of commodities under different humidity conditions. It will be noted that unwrapped crackers may reach a moisture content as low as 2% after exposure to inside dry winter conditions and as high as 8% under moist summer conditions. Cigarettes under like conditions will show moisture variations of from 9 to 21%.

During World War II, the packaging field was confronted with a large number of problems because of differences in humidity throughout the world, as well as differences in handling and shipping methods. The diversity of materials to be protected added to the magnitude of the problem. Food products might be frozen and stored in cold storage plants, while steel products would be required to withstand temperatures of 90 to 95 deg. F. or higher and humidities of 95 to 100% without rusting. Early in the war, the best type of package required for each Army or Navy service was not always known. As the war progressed, sufficient information was obtained to write applicable specifications for packaging as exemplified by AN-C-67a, Nov. 25, 1943 (Army-Navy). As might be expected, these specifications as well as others could not be met with the traditional 1930 standard wax formulations.

To improve special properties in wax blends, concentrates of polyisobutylene are used in either fully refined paraffin or microcrystalline wax. In their pure form polyisobutylenes, particularly the higher molecular-weight grades with a Staudinger molecular weight of about 50,000 to 200,000, are so highly cohesive and adhesive that without the proper experience and heavy duty equipment their blending with waxes and other wax-polymer systems to form homogenous compounds with good color and constant viscosity is a difficult task.

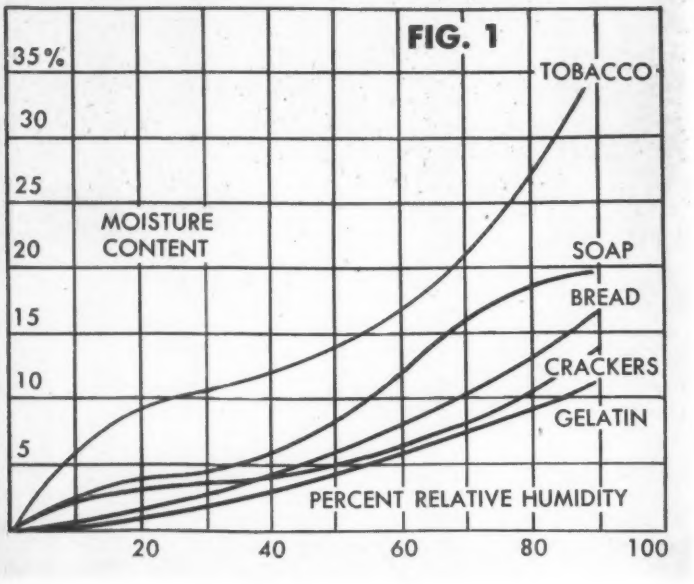
Polyisobutylene concentrates were designed so that the users of wax could easily dissolve polyisobutylene with a minimum of time and effort. Oxidation studies show that Arwaxes[2] are about 30 times more stable (viscosity changes vs. time) at 250 to 300 deg. F. than otherk nown wax-polymer blends. The polyisobutylene concentrates are more resistant to oxidation and depolymerization than wax blends containing the several anti-oxidants described by Vore (4, 5).

Such concentrates are elastic, heat stable, odorless, tasteless, light in color, chemically inert and compatible with other hydrocarbon products such as the synthetic rubbers GR-S, GR-I or Butyl, S-polymers, PS50 resin, asphalt, styrene-butadiene copolymer resins, etc. They

* Research Laboratories, American Resinous Chemicals Corp., Peabody, Mass.

[1] Numbers in parentheses refer to "References" appended.

[2] American Resinous Chemicals Corp. brand of polyisobutylene concentrates.



HOW MOISTURE CONTENT of certain types of commodities varies with the relative humidity.

improve ozone resistance of rubber. Because of these rather important properties, they are used in packaging applications in or for:

- Up-grading tensile strength of wax
- Improving wax stability
- Water-vaporproof flexible coatings for paper and plastic films
- Improved adhesion in lamination of papers and foils
- Heat-seal coatings
- Pressure tapes and emulsions
- Fruit and vegetable coatings
- Rust preventatives
- Asphalt plasticizer

To produce compositions satisfactory for the uses listed above, the polyisobutylene concentrates are generally blended with other available well-known materials.

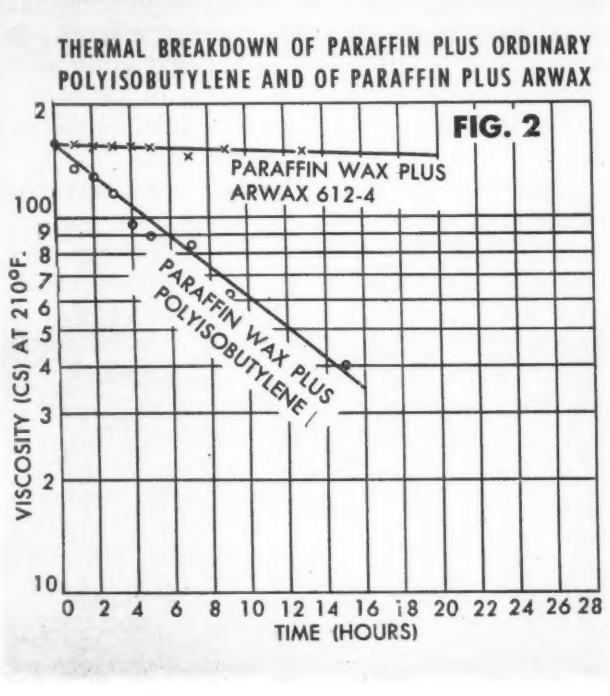
Physical properties

Thermal stability. Most blends of low-iodine-number olefin polymers such as polyisobutylene and wax when subjected to heating undergo a loss in viscosity. The extent to which this loss occurs is an important factor in the coating of paper because a uniform viscosity is required to give coats of constant thickness. A blend showing no loss in viscosity obviously would be most desirable. The loss in viscosity of two polyisobutylene blends will be found in Fig. 2. The procedure consisted of heating samples in metal containers at a temperature of 240 deg. F., during which time they were moderately agitated with a large air stirrer. Samples were taken at regular intervals and viscosities determined on the samples. It is apparent that the blend of paraffin wax with Arwax 612-4 is practically heat stable, while the ordinary polyisobutylene-wax blend is poor on this point. The concentration of polymer was the same in both cases, as well as molecular weight and original viscosity.

Tensile strength. The tensile strength of paraffin wax can be increased by addition of polyisobutylene. The extent to which molecular weight and polymer concentration affect the tensile has been determined by the use of Perkins improved tensile tester and the results are shown in Fig. 3. These results show, peculiarly enough, that the tensile strength is controlled primarily by the concentration of polyisobutylene. The molecular weight of the polyisobutylene is less important. With a wax of 135 deg. M.P. and a tensile strength of 58, 1% Arwax 612-4 raised the tensile to 89 and 4% Arwax to 94. Using a lower molecular weight polymer, Arwax 612-6, 1% Arwax raised tensile to 86, 4% to 88.

Water-vapor penetration. In the past it was never known for certain that water-vapor penetration of paraffin wax films could be improved by the incorporation of aliphatic polymers such as polyisobutylene. The conflicting results from industry and laboratories were in part due to test methods. To establish the effect of Arwax on WVP, a great deal of research work was carried out. Statistical probability methods were used to establish the ± value of all results and polyethylene films were used as controls in the test. The use of polyethylene film helped to give a direct check on the General Foods water-vapor cabinet.

Three coatings of 25-lb. white sulfite paper were prepared by a wax paper manufacturing company. One sample coated with 134 deg. F. M.P. paraffin wax contained no polybutene. Two succeeding samples coated contained 4.8 and 9.6% of Arwax 612-5, respectively; this represents a polymer content of approximately 1 and 2% of polyisobutylene (100,000 m. wt.) in the



final wax coats. Samples were coated at 175 deg. F. and cooled to 32 deg. F. at a rate of 550 ft./min.

These samples, as well as polyethylene films, were evaluated in the cabinet to determine their permeability to water vapor. The test consists of subjecting the samples for 68 hrs. in an atmosphere of 95% relative humidity at 100 deg. F. The sample is sealed to a container of calcium chloride. The gain in weight before and after the test, multiplied by a constant factor, gives the grams of water vapor transmitted by 100 sq. in. of sample per 24 hrs. at 100 deg. F. and 95% R. H.

The data in Fig. 4 show that Arwax 612-5 markedly decreases the water-vapor penetration. These results are of extreme interest in creased films. The General Foods water-vapor permeability reproducibility study made to cover 48 determinations in each study is summarized in Table I.

TABLE I—G.F.W.V.P. REPRODUCIBILITY STUDY

Sample	*Limits @ Ps*—0.9*	*Limits @ Ps—0.99*
Wax—on paper	0.614 ± 0.053 g. H_2O/100 sq. in./ 24 hrs.	0.614 ± 0.084 g. H_2O/100 sq. in./ 24 hrs.
0.001-in. thick polyethylene film (Plax)	0.817 ± 0.031 g. H_2O/100 sq. in./ 24 hrs.	0.817 ± 0.050 g. H_2O/100 sq. in./ 24 hrs.
0.004-in. thick polyethylene film (Plax)	0.313 ± 0.0044 g. H_2O/100 sq. in./ 24 hrs.	0.313 ± 0.0074 g. H_2O/100 sq. in./ 24 hrs.

* Ps (statistical probability): 0.9 = 9 chances in 10. 0.99 = 99 chances in 100.

The wax-coated paper was better in WVP value than the 0.001-in. polyethylene film, but not as good as the 0.004-in. film.

The good results obtained with Arwax 612-5 on water vapor suggested a study of its value in wrapping frozen foods. As is well known, it is important that a wrapping material must prevent desiccation of the enclosed food, protect the food from absorbing outside flavors and odors, and protect the food from contamination. It is also important that the paper not crack or become brittle at a low temperature; that it not absorb blood, water, oil or grease, and that it not impart flavors to the product enclosed. In order to learn whether or not Arwax-coated papers could fulfill these above demands, they were subjected to tests to determine:

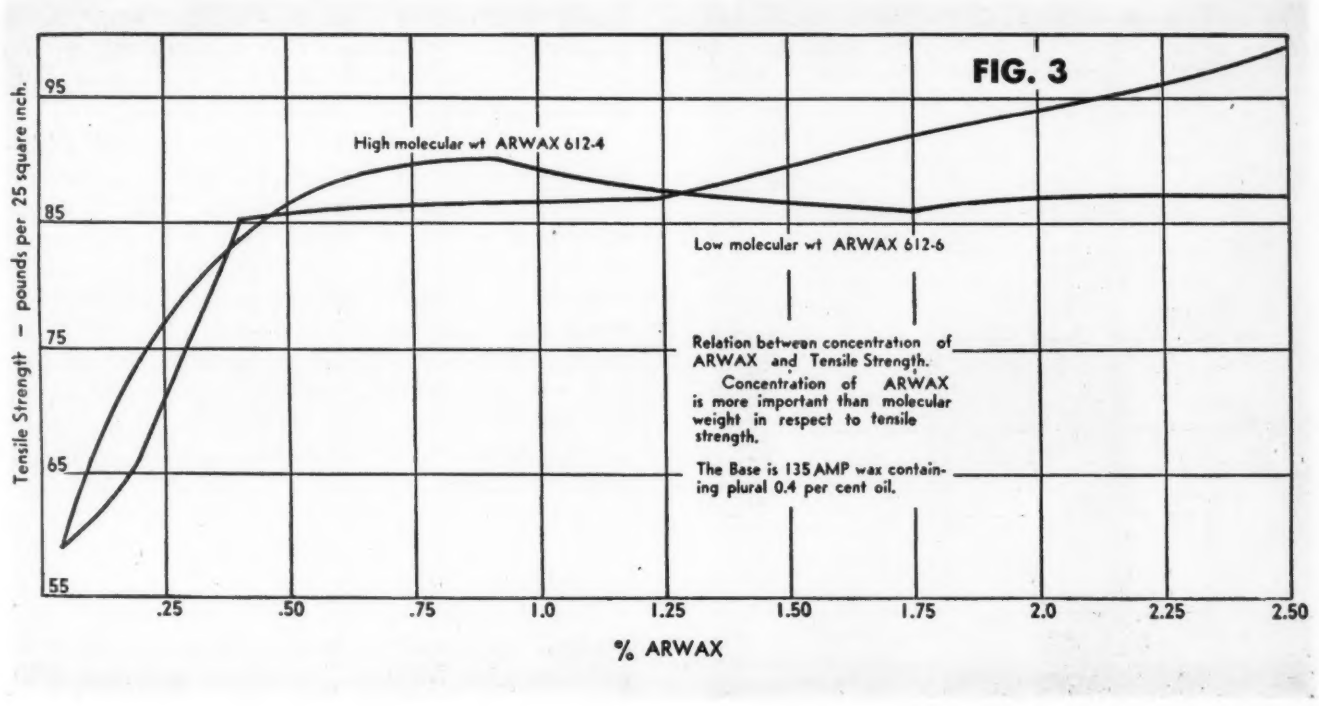
a. Loss of water vapor through the paper
b. Resistance to bloodstains, grease and oils
c. Imparting of flavors to products
d. Brittleness and cracking at low temperatures and actual storage conditions

The methods involved in determining the water-vapor transmission through these papers were those described by Tressler and Evers (6, 7).

Twenty cc. of water were put in each of a number of crystallizing dishes (4 cm. in diameter) and the water was allowed to freeze. Then a piece of the coated paper which was to be tested was sealed over the top of each dish, using a special wax (22% paraffin, 23% beeswax and 55% petroleum jelly—"Vaseline"). Superfluous paper was then trimmed off.

The covered dishes were then placed in a constant temperature, constant humidity chamber located in a 5 deg. F. room. The temperature was thermostatically controlled at 5 deg. F. with a relative humidity of 45.0% controlled by sulphuric acid solutions. The papers were then allowed to remain 48 hrs. to come to

SHOWING EXTENT to which molecular weight and polymer concentration affect the tensile strength of paraffin wax.



equilibrium with the air before they were weighed and the weights recorded.

The dishes were then returned to the chamber for seven days before the second weights were made and recorded. Each paper was run in triplicate. The differences between the first weights and second weights, the average loss per day per dish, the average loss per paper and the loss per square meter were then calculated.

The figures in Table II are the result of the water-vapor transmission through the various papers at 5 deg. F. and 45% relative humidity.

TABLE II—WATER-VAPOR TRANSMISSION OF WRAPPING PAPERS AT 5 DEG. F.

Paper	*Type*	*Average loss in grams per sq. meter per day*
1	Parchment—no coating	72.9
2	Parchment, 5 lbs. of 134 deg. F. M. P. wax per ream—one side	18.0
3	Parchment, 5 lbs. of 134 deg. F. M. P. wax per ream containing 5% Arwax 612-5	6.4
4	Glassine—no coating	88.6
5	Glassine, 5 lbs. of 134 deg. F. M. P. wax per ream—one side	5.8
6	Glassine, 5 lbs. of 134 deg. F. M. P. wax per ream containing 10% Arwax 612-5	0.9

The methods used for the miscellaneous tests were those used by Du Bois and Tressler (7). Results are listed in Table III.

It is interesting to see that the Arwax improved the heat-sealing quality as well as low-temperature properties of the wax without loss of properties in miscellaneous tests.

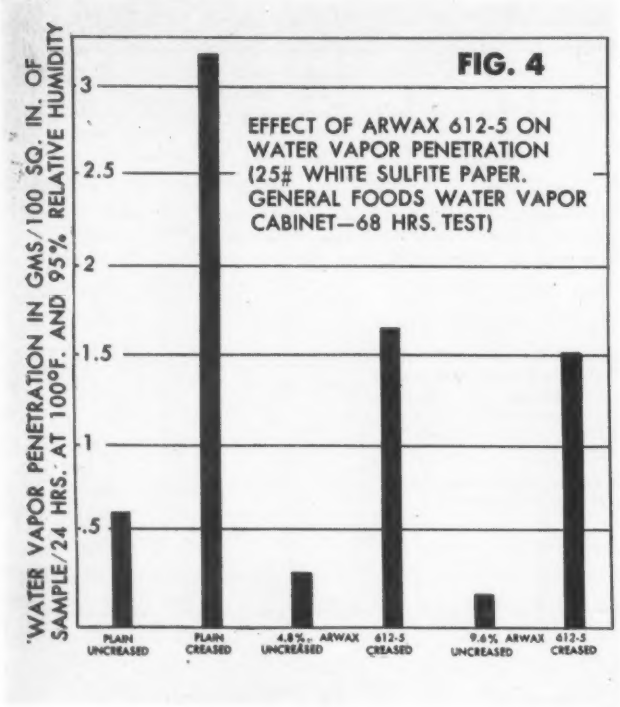


FIG. 4
EFFECT OF ARWAX 612-5 ON WATER VAPOR PENETRATION (25# WHITE SULFITE PAPER. GENERAL FOODS WATER VAPOR CABINET—68 HRS. TEST)
WATER VAPOR PENETRATION IN GMS/100 SQ. IN. OF SAMPLE/24 HRS. AT 100°F. AND 95% RELATIVE HUMIDITY
3
2.5
2
1.5
1
.5
PLAIN UNCREASED
PLAIN CREASED
4.8% ARWAX 612-5 UNCREASED
4.8% ARWAX 612-5 CREASED
9.6% ARWAX 612-5 UNCREASED
9.6% ARWAX 612-5 CREASED

TABLE III—RESULTS OF MISCELLANEOUS TESTS

Paper	*Heat-sealing quality*	*Stain-proof*	*Grease-proof*	*Condition at zero*	*Water-proof*	*Brittle*	*Flavor imparted*
1	No heat sealing	Soaks up stains	Takes up grease	Good	No	No	None
2	Fair	Stains	Not entirely	Fair	Not entirely	Slight	None
3	Good	Stains	Not entirely	Good	Not entirely	No	None
4	No heat sealing	Fair	Fair	Good	No	No	None
5	Fair	Fair	Fair	Fair	No	Yes	None
6	Good	Fair	Yes	Good	No	No	None

As a practical check, lamb chops were wrapped in paper No. 6 and a stockinette was pulled over the paper and the meat. The meat, after being frozen in an air blast at −10 deg. F., was packaged and placed on a wire rack held at −10 deg. F. for one day. After that the product was weighed and then placed at 5 deg. F. on an open shelf. The room had an approximate relative humidity of 35%. After a period of seven months the product was weighed again and the loss in weight was only 0.27%. The meat was found to have no odors, the fat was not rancid and the test appeared to be quite successful.

Thickening power. As the concentration of Arwax in wax is increased, the viscosity increases in almost a logarithmic manner. Viscosity may be controlled by the amount as well as the type of Arwax, because the thickening power of polyisobutylene is approximately proportioned to its Staudinger molecular weight. The thickening property of Arwax has its advantages as well as disadvantages. For example, in the manufacture of candles it may be important to have a product that burns for a long period of time. Because Arwax increases the viscosity of the wax, the over-all rate of burning of an Arwax-blended candle is much longer than that of a paraffin candle. However, in paper-coating operations, high-viscosity blends are difficult to apply, so in this field best results are usually obtained when 3 to 10% Arwax 612-4 is used.

Tack. Tack is imparted to paraffin and microcrystalline waxes by the use of low-molecular-weight concentrates such as Arwax 612-6. This tack has value in a number of applications such as pressure-sensitive tapes, laminates, etc. On the other hand, if reduced tack is desired, the waxes may be blended with Arwax 612-4, Arwax 612-5 or Arwax 613-1. Tack is a function of the molecular weight of the polyisobutylene used. If dry, tack-free, flexible films are desired, all tack can be eliminated by blending the final product with less than 10% of the Arwaxes containing the high-molecular-weight polymers or by blending with pigments or clays, as well as by compounding with other hydrocarbon resins such as S-polymers, cyclized rubber and traces of solid polyethylene.

White pigments are occasionally used for color and opacity. Data have been secured on the effect of fillers on the WVP of (*Continued on page 176*)

FILMS FOR CHERRIES

Government study provides some significant data on the preservative qualities of various films used in packaging of fresh fruits.

By FISK GERHARDT and T. R. WRIGHT*

The sweet cherry industry in the Northwest has tried constantly to preserve the original appearance and condition of its fresh fruit during marketing and has given considerable attention to the improvement of methods of packaging, refrigerating and transporting this luxury commodity.

Carbon dioxide gas has been found of value as a supplement to refrigeration in transit by reducing decay and by preserving the original bright appearance of sweet cherries (2–6).[1] Notwithstanding the general lack of gas retentiveness of present-day refrigerator cars, it is now common practice among shippers in Washington and Oregon to add solid carbon dioxide (dry ice) in quantities of 850 to 1,000 lbs. per car in an effort to maintain carbon dioxide concentrations as near the optimum of 20% (4) as possible. In actual practice, however, the gas escapes rapidly from the refrigerator car and concentrations of 5 to 10% are common. Seasonal requirements of dry ice for shipment of cherries now approximate 375,000 lbs. in Washington alone. It seems apparent, however, that a more efficient method for the transport of sweet cheeries in an atmosphere of carbon dioxide is urgently needed.

Transparent synthetic films with varying degrees of retentiveness of water vapor and carbon dioxide are being used to package an ever-increasing volume of fresh fruits and vegetables. Stahl and Vaughn (10) have recommended the lighter weights (20 and 40 gauge) of Pliofilm for a variety of Florida produce and the same material has been found to control Jonathan spot of apples because of its CO_2 gas rentention (8). Fresh fruits and vegetables are living organisms to the extent that they "breathe" or respire. Oxygen is consumed and carbon dioxide is liberated in this process. When fresh produce is packaged in sealed films too impervious to the passage of these gases, carbon dioxide and oxygen attain critical levels which can destroy the normal flavor of the product or prevent its ripening. Bratley (1) found further ripening of tomatoes was dangerously retarded in cellophane consumer-unit packages, especially when sealed before the fruit reached an over-all light pink color. He suggested the use of cellophane with two or three $^1/_8$-in. perforations per box. Scott and Tewfik (9) found that cellophane, and Pliofilm also, could produce conditions injurious to tomatoes, sweet corn and apples. The peaches that Judkins (7) placed in heat-sealed Pliofilm developed alcoholic, anaerobic off-flavors during storage. He suggested that the gas-diffusion rate of the film be increased. Certain types of films, through their selective permeability, may so regulate the escape of carbon dioxide produced by the enclosed fruit as to preserve the fresh appearance of sweet cherries throughout their eight- to 12-day shipment and marketing period.

We have made a preliminary study of the carbon dioxide gas retentiveness and the general suitability of various types of Pliofilm for packaging Bing cherries. We also compared the build-up of CO_2 gas, the amount of decay and the appearance and taste of the fruit in sealed Pliofilm packages with that in polyethylene, cellophane and Lumarith (one type of cellulose acetate).

The following types and gauges of film were used: Pliofilms N0-170, N1-170, P6-120, P6-75, FF-75, Lumarith P903-120, polyethylene 3 mil,[2] and cellophane 300 MSAT-86. The approximate diffusion rates of these films for water vapor and carbon dioxide as supplied by the manufacturers are given in Table I. Pliofilm of 170 gauge, because of its great retentiveness of carbon dioxide, was used in an effort to obtain maximum atmospheric concentrations of CO_2 in the packages of fruit. Film of this gauge is not intended by the manufacturer for packaging fresh fruit.

When practicable, certain types of Pliofilm were used as sealed bags, as liners and as stretch wraps. The

[2] The polyethylene film used in these tests was the Du Pont brand known as "polythene."

TABLE I—APPROXIMATE DIFFUSION RATES OF VARIOUS TYPES OF FILM USED IN PACKAGING

Films	*Water vapor (gm./100 in.²/- 24 hrs./100 deg. F.)*	*Carbon dioxide into air (cc./100 in.²/- 100 hrs./- 760 mm./77 deg. F.)*
Pliofilm—170 N0	0.30	76
Pliofilm—170 N1	0.33	96
Pliofilm—120 P6	1.90	1,211
Pliofilm—75 P6	3.20	2,485
Pliofilm—75 FF	5.19	5,289
Lumarith (P903-120)	1,228	2×10^{14}
Polyethylene (3 mil)	0.28*	1,750
Cellophane (300 MSAT-86)†	0.57*	35

* Determined at 40 deg. C.
† Data for 300 MSAT-86 not available. Manufacturer questions whether diffusion rates would be much different from those for 300 MSAT-82.

* Senior plant physiologist and assistant plant pathologist, respectively, U. S. Dept. of Agriculture, Wenatchee, Wash.
[1] Numbers in parentheses refer to "References" at end of article.

TABLE II—CARBON DIOXIDE IN THE AIR AND FRUIT OF BING CHERRIES PACKED IN DIFFERENT FILMS*

Type of film	CO_2 in atmosphere surrounding fruit—% (sealed bags) 3 days	6 days	10 days	2 additional days at 75 deg. F.	CO_2 gas inside fruit (sealed bags) (mg./100 gm. of tissue)
Pliofilm—N0-170	13	26	40	70	83.6
Pliofilm—N1-170	10	21	30	72	...
Pliofilm—P6-120	12	25	32	62	68.9
Pliofilm—P6-75	10	15	38	70	...
Pliofilm—FF-75	14	18	21	38	46.0
Cellophane 300 MSAT-86	1	1	1	4	20.0
Polyethylene 3 mils	4	3	3	10	33.7
Lumarith P903-120	0	0	0	0	18.9
		Liners			*Liners*
Plain paper—check	0	0	0	0	19.9
Pliofilm—N0-170	0	0	0	0	18.4
Pliofilm—FF-75	0	0	0	0	18.7
All other above types film	0	0	0	0	...
		Stretch wraps			
Pliofilm—P6-75	9	10	8	16	...
Pliofilm—FF-75	8	8	6	13	...
Pliofilm—P6-120	11	15	30	45	...

* During storage at 36 deg. F. and after holding two more days at 75 deg. to simulate transit and retail handling.

TABLE III—LOSS OF MOISTURE FROM STEMS AND FRUIT OF BING CHERRIES WHEN PACKAGED IN VARIOUS KINDS OF FILM*

Type of film	Stems† Sealed bags, %	Liners, %	Stretch wrap, %	Fruit† Sealed bags, %	Liners, %	Stretch wrap, %
Pliofilm—N0-170	3.5	8.5	...	0.07	1.22	...
Pliofilm—P6-120	5.0	10.1	9.6	0.08	1.88	0.47
Pliofilm—P6-75	7.1	11.5	10.6	0.20	1.96	0.57
Pliofilm—FF-75	6.9	12.1	12.5	0.12	2.51	0.47
Cellophane 300 MSAT-86	8.1	...	...	0.70	...	...
Polyethylene 3 mils	5.4	...	...	0.50	...	...
Lumarith P903-120	16.8	...	...	3.12	...	...
Plain paper—check	...	20.7	...	...	4.90	...

* After storage at 36 deg. F. for 10 days and holding at 75 deg. for two additional days to simulate shipment and retail handling.
† Average of triplicate samples.

latter were made by heating the Pliofilm, placing 2.5 lbs. of the fruit on the heated film held between two hoops and rapidly stretching, twisting and heat sealing the package in one operation.

Sealed bags to hold 5 lbs. of fruit were made by heat sealing or Scotch taping cut sheets of the various films. Each bag had a metal tire valve cemented into it to facilitate removal of air samples for the measurement of carbon dioxide. All sealed packages were water-tested to insure against leakage.

In 1947 the prevalence of rains during the harvest season caused heavy damage to the Washington State cherry crop and introduced extra hazards in the shipping and marketing of the fruit. The tests reported herein on pre-packaging were therefore of more than ordinary significance. Two hundred pounds of these rain-weakened Bing cherries were harvested at Wenatchee, Wash., on June 16 and carefully sorted to remove all fruit with such skin injuries as rain cracks. The well-composited fruit was then separated into 5-lb. lots for packaging in wooden cherry lugs, or into 2.5-lb. lots for stretch wrapping. All experimental packages of fruit were then stored at 36 deg. F. for 10 days and for an additional two days at 75 deg. before examination.

The freshness of cherries as received on the market is usually judged by the condition of the stems: i.e., whether they are green and fresh or are more or less browned, dry and shriveled. In these tests the extent of loss of moisture from the cherry stems was determined by snipping off the stems close to the fruit, placing them in a vacuum oven held at 60 deg. F. and drying to constant weight. Loss in weight of the fruit during storage was determined by weighing the entire sample package to the nearest gram before and after storage. Carbon dioxide in the packaged atmosphere was measured with a Hayes gas analyzer. The amount of CO_2 in the internal atmosphere of the fruit was obtained by reflux-aeration (3) of a given weight of tissue.

Results

Carbon dioxide: Data relative to the carbon dioxide in the fruit and in the atmosphere surrounding the fruit in various packages are given in Table II. When used as sealed bags, even the lightest type of Pliofilm (FF-75) caused a rapid accumulation of CO_2 in the package. When containers were held at 75 deg. F. for two days, those made of Pliofilm except the FF-75 type contained injuriously large amounts of CO_2. Even when used as

COMPARISON of apples stored for six months in Pliofilm-lined case (left) with apples picked from same tree on same day and held under identical conditions, but with ordinary paper case liner (right). This test on apples conducted at Iowa State College supports the findings of the authors of the accompanying article as to the value of a certain amount of CO_2 gas retention in preserving the marketable conditions of Bing cherries.

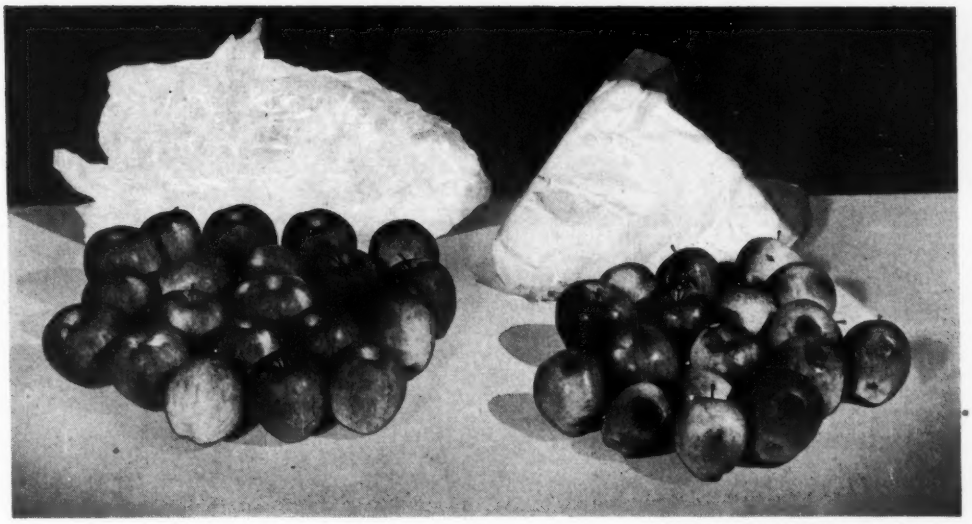


PHOTO COURTESY GOODYEAR TIRE & RUBBER CO

stretch wraps, the P6 and FF types of Pliofilm accumulated sizable quantities of carbon dioxide.

When the various Pliofilms were used as closely fitted liners, none of them was sufficiently tight to cause any measurable increase of CO_2 in the packed containers. In other words, the Pliofilm must be sealed to insure a desirable accumulation of carbon dioxide within packages of cherries. Sealed bags of polyethylene retained small quantities of CO_2; cellophane, very small amounts; Lumarith, none. Because of the small diffusion rate of cellophane for CO_2 (Table I), some leakage must have taken place through the sealed bags to account for the small amount of gas retention.

Moisture change: The loss of moisture from the stems of Bing cherries (Table III) was least in the sealed bags made from 170-gauge Pliofilm. The moisture lost through the other grades of Pliofilm was similar to that lost through cellophane and polyethylene (5 to 8%). Stems of cherries packaged in sealed Lumarith lost almost as much moisture during storage (16.8%) as did check lots packaged in plain paper liners (20.7 %). This loss of moisture was sufficient to detract from the appearance of the stems.

Loss in weight of the fruit itself during storage was practically negligible when sealed in Pliofilm, cellophane or polyethylene bags. Even (*Continued on page 214*)

TABLE IV—DECAY IN BING CHERRIES WHEN PACKAGED IN DIFFERENT KINDS OF FILM*

Type of film	*Decay* — *Sealed bags* (%) (*Std. error*)	*Liners* (%) (*Std. error*)	*Stretch wraps* (%) (*Std. error*)
Pliofilm—N° 170	5.53 ± 0.95	41.27 ± 0.10	.....
Pliofilm—P6 120	4.70 ± .78	32.36 ± 2.54	13.67 ± 2.19
Pliofilm—P6 75	6.81 ± .70	34.95 ± 1.73	31.4 ± 1.91
Pliofilm—FF 75	12.65 ± .69	27.80 ± 1.95	30.13 ± 3.36
Plain paper (check)	.....	33.41 ± .43	.....
Polyethylene†—3 mils	16.68	.....	.....
Cellophane†—300 MSAT-86	24.17	.....	.....
Lumarith†—P903-120	23.00	.....	.....

* Triplicate lots of fruit were examined after storage at 36 deg. F. for 10 days and holding at 75 deg. an additional two days to simulate commercial shipment and retail handling.
† These films in single lots only.

TABLE V—DESSERT QUALITY OF BING CHERRIES WHEN PACKAGED AND STORED IN DIFFERENT KINDS OF FILM*

Type of film	*Dessert quality* — *Sealed bags*	*Liners*	*Stretch wraps*
Pliofilm—N0 170	Anaerobic Stale Poor†	Normal Good	.....
Pliofilm—N1 170	Anaerobic Stale Poor†	Normal Good	.....
Pliofilm—P6 120	Anaerobic Stale Poor†	Normal Good	Abnormal Poor
Pliofilm—P6 75	Anaerobic Stale Poor†	Normal Good	Normal Carbonated‡
Pliofilm—FF 75	Normal Carbonated‡	Normal Good	Normal Carbonated‡
Lumarith P903-120	Normal Good	.....	.....
Cellophane 300 MSAT-86	Normal Good	.....	.....
Polyethylene 3 mils	Normal Good	.....	.....

* The fruit was examined for dessert quality following a storage period of 10 days at 36 deg. F. and two additional days at 75 deg.
† Stale and anaerobic taste persisted after fruit had been removed from sealed bags and aerated for 24 hrs.
‡ Slight carbonated taste disappeared after aeration. Flavor not impaired from a commercial standpoint.

Questions and Answers

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 122 East 42nd St., New York 17, N. Y. Your name or other identification will not appear with any published answer.

Construction of paper flour bags

QUESTION: I am interested in more detailed information concerning flour bags. Can you tell me how they are made and something about the paper used? Is the paper coated, laminated or treated in any way? What are the weights of the finished paper?

ANSWER: Paper flour bags are generally made from a single ply of a special heavy-duty sheet. The bags are made on automatic equipment, using aqueous adhesives, and are formed with gussets and various types of bottom constructions.

The paper is made on a cylinder machine and has a blue inner surface with a coated exterior. The blue color is used to enhance the whiteness of the flour, while the surface coating is used to improve the color and printability. Neither the coating nor the paper is made to be waterproof or water-vaporproof. The paper is usually lightly embossed in vertical lines to make the package more flexible, to enable easier turning down of the top and as a matter of trade custom.

The paper is usually a kraft type, although mixed fibers may be used. A 5-lb. flour bag uses a 65-lb. ream weight paper. This general construction is not controlled by patent, although certain modified forms or special types might be so protected. I would suggest, however, that you make a careful patent search if you are interested in the equipment, product and processes used to make flour or similar paper bags.

Preventing deterioration of canned foods

QUESTION: We package dry food products in metal cans for general distribution in this country (India). The metal cans are not soldered but are well seamed and we do not think it is possible for insects to get into the cans. We are reducing the moisture content of our products by drying them in the sun and fumigating with carbon tetrachloride. We would like to know if this process is effective or suitable to prevent deterioration of our products.

ANSWER: Apparently your metal can is insect tight, but you must remember that some insects are extremely small in the larva stage and also that moisture and mold spores can enter the can through any hole, however small. Sun drying will help preservation by reducing the moisture content of these dried products, but a heated drier of any type is a quicker and more positive means of reducing the moisture content with safety. Also, with such a drier the temperature could be raised high enough for a short period to kill insects and their eggs.

Carbon tetrachloride vapors are extremely toxic to insects and animals and they must be removed from the product after the fumigating has been accomplished. Their effectiveness and removal depend on the apparatus you are using, your product and processing cycle. It is suggested that you contact a specialist in this field to find a more effective and safer fumigant for food products and have them check the effectiveness of your process.

You may find that discoloration and rusting of your product against the walls of the can can be eliminated by the use of a paper liner or by previously packing the product in a bag before inserting it in the can. In any case, the paper used must be dry and mold free.

Cover adhesion for frozen food packages

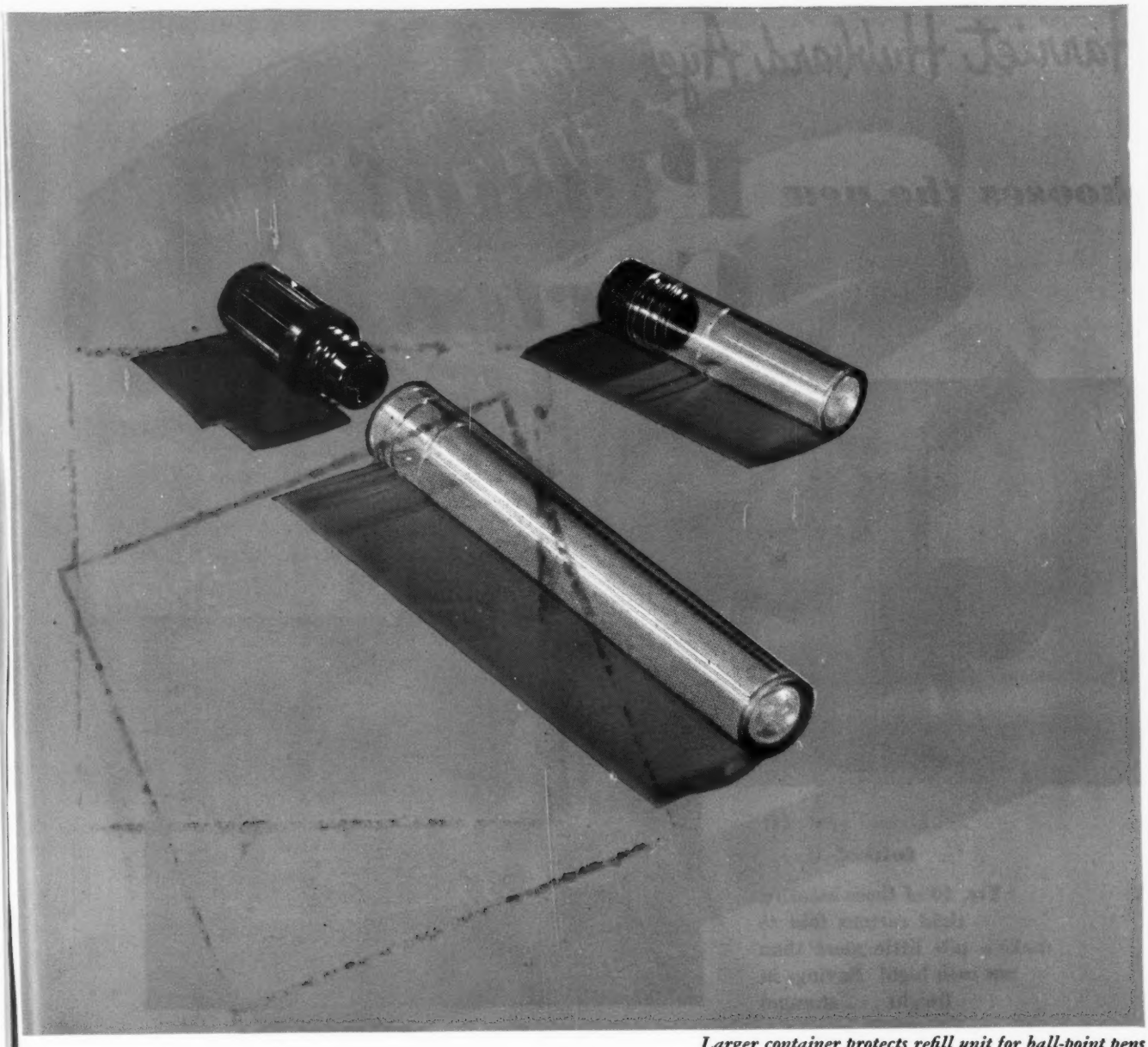
QUESTION: My company has developed a rectangular frozen food package for use in the home or in locker plants. This package has a slip-on metal end. Should a cap of this type be attached more securely by taping or wire ties? What is your opinion?

ANSWER: There is no need to develop opinions on this question, since the answer can be found in a few controlled and carefully handled experiments.

A well-designed, slip-on cover would stay in place on a rigid container if the container were frozen with cover up. However, if liquid or semi-liquid products were frozen with the cover down or sidewise, then it is very probable that the volume increase of water to ice would force off the cover.

You should test your containers by filling them with several different kinds of products—free-flowing, semi-liquid and liquid types. Each type of product should be frozen in each of four positions of the container: (1) cover up, (2) cover down, (3) cover sidewise with the container on the narrow side and (4) cover sidewise with the container on the wide side.

The various methods of securing the covers may be tried and the packages put through a rapid freezing cycle. The kind and degree of cover adhesion can be objectively developed by such a technique.



Larger container protects refill unit for ball-point pens —the other protects fountain-pen points

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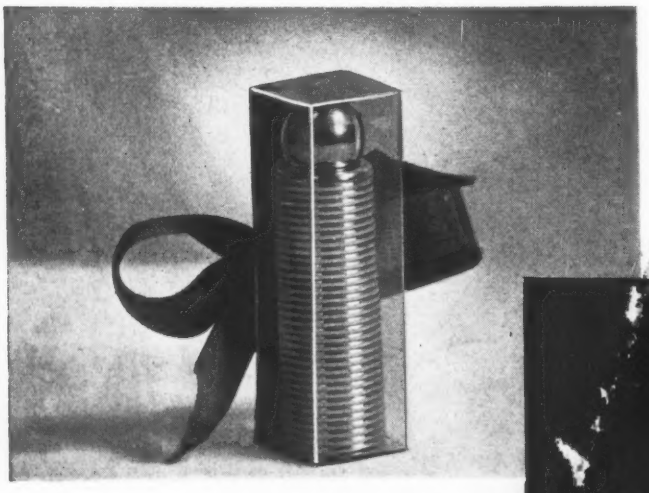

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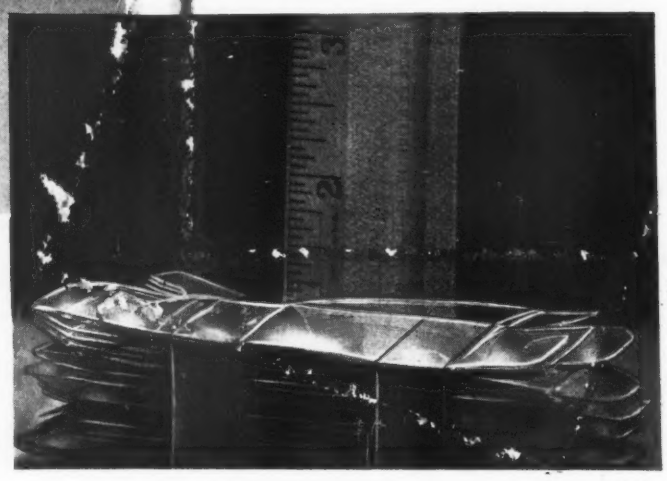
Smart, sparkling Plastafol Cartons now heighten the eye-appeal of Harriet Hubbard Ayer's new Yu perfume flacon.



Here are 50 folded flat!

Yes, 50 of these amazing rigid cartons fold to make a pile little more than one inch high! Savings in freight . . . storage!

Put your product on parade with ***Plastafol,*** the only all-transparent, rigid carton that folds flat!

- Made of the finest window-clear plastic
- Low in cost—surprisingly so—because mass-produced by a patented process
- Saves freight and storage charges when folded flat
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- New, yet already *proved by use* in packaging such varied products as perfume atomizers and industrial drills

Write or phone for information, technical advice, ideas, prices!

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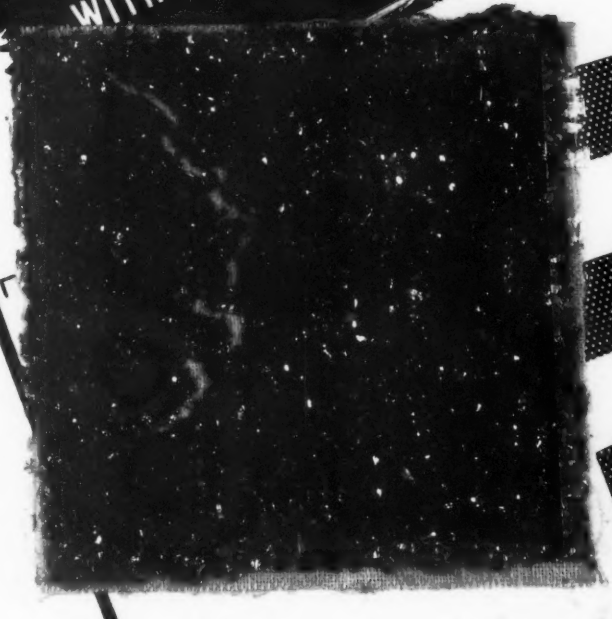

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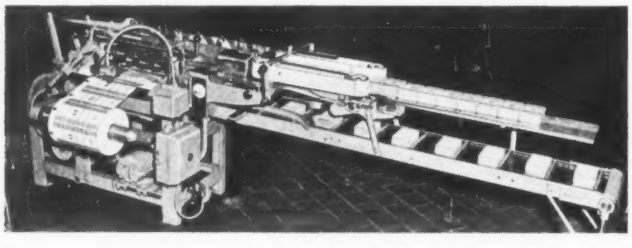
Equipment and Materials

LABELING AND OVERWRAPPING MACHINE

Hayssen Mfg. Co., Sheboygan, Wis., have introduced a new machine which will apply labels to the composite fibre container with metal ends for frozen foods, or will completely



overwrap regular consumer sized cartons. The machine is fully automatic, loading and unloading at the same end, so that it lends itself to one-person operation. It may also be hooked to line conveyors for automatic loading and unloading.

The machine has a capacity of 2,400 packages per minute and is said to be easily and quickly adjustable. It is designed to handle packages or composite containers ranging from 5 to 9 in. long, 2 to 4 in. wide and 1 to 3 in. high. The label or band applied to frozen food containers is completely sealed to the carton or can so that it cannot be torn off. The company explains that heretofore this type of can was usually printed at the factory and necessitated a large inventory being carried at the packer's plant.

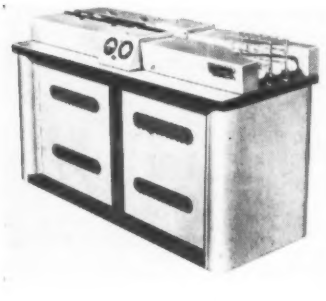
The wrapping material, required in roll form, may be waxed paper, heat-sealing cellophane or heat-sealing foil. The electric sealing plates are thermostatically controlled and an electronic registration control is provided for the uniform centering of the label or wrapper.

THINNER POLYETHYLENE FILM

The Plastic Division of Reynolds Metals Co., New York, announces that Reynolon polyethylene film is now available in 0.0015-in. gauge in a maximum width of 45 in., in addition to the standard gauges of 2 to 5 mils. The company reports the most promising outlets for the new film will be for the packaging of meat, fish, baked goods, confectionery and frozen food products.

AUTOMATIC CHECK WEIGHER

A new, improved model in the line of Selectrol automatic check-weighing equipment has been announced by The Exact Weight Scale Co., Columbus, Ohio. The Model 1200 illustrated has a maximum speed of 90 packages per minute and an electronic means of classification which requires no synchronization with the feeder conveyor. It is available in a variety of capacities ranging from a few ounces to several pounds. The rejection-point accuracy is plus and minus 1 gm., with adjustable over- and under-weight tolerance. The weighing element is an even-balanced aluminum alloy lever supported by steel pivots set in agate V-bearings. When adjusted or set, it may be locked to insure protection against tampering.



Available on special order for use with the Selectrol check weighers is an auxiliary counter and indicator which totals the number of packages going [illegible] classification, i.e. over weight, under weight and correct weight. These remote indicators, which flash a visible signal, may be located at any convenient point adjacent to or away from production lines.

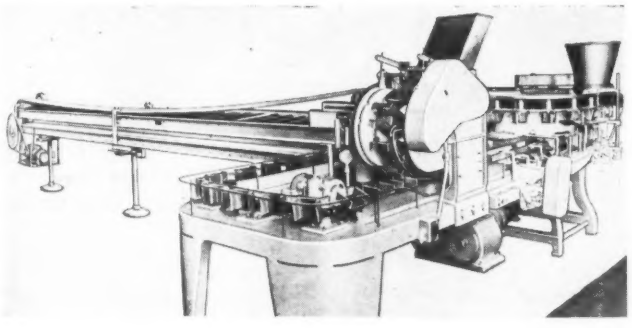
TWO NEW PLAS[illegible]

Visking Corp., Ch[illegible] introducing two new types of plastic film casings for [illegible] and meat products. Their Visking saran, for cooked and be[illegible]ked loaves and hams, is said to offer the following advantages: (1) [illegible] is supplied as seamless tubing; there are no seams to split open. (2) Casing is oversized for easy stuffing, after which it shrinks tight; no soaking or preheating of the casing is needed. (3) There is no loss in weight of product and no shrinkage, since the material is practically moistureproof. The film is available in a range of four colors and is said to have good printability.

"Viskettes" is the designation for the company's new polyethylene casing for pork sausage. This material is reported to insure longer product freshness and to be greaseproof, moistureproof and freezeproof; it won't crack even at 94 deg. below zero. Viskettes are regularly available in 1-lb. units with one end pre-sealed to save time and work in packaging and may be used with a 1-lb. dispenser as well as a regular stuffer. The company can also supply larger units, if desired.

AUTOMATIC CARTON FILLER AND SEALER

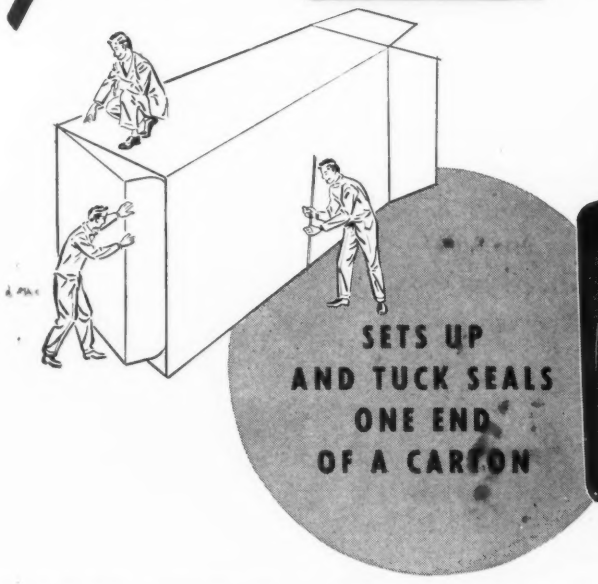
Food Machinery Corp.'s Sprague-Sells Div., Hoopeston, Ill., announces an automatic high speed carton filler and sealer suitable for packaging any free-flowing dry product, or free-running fresh or frozen food, in end-fill folding cartons. The

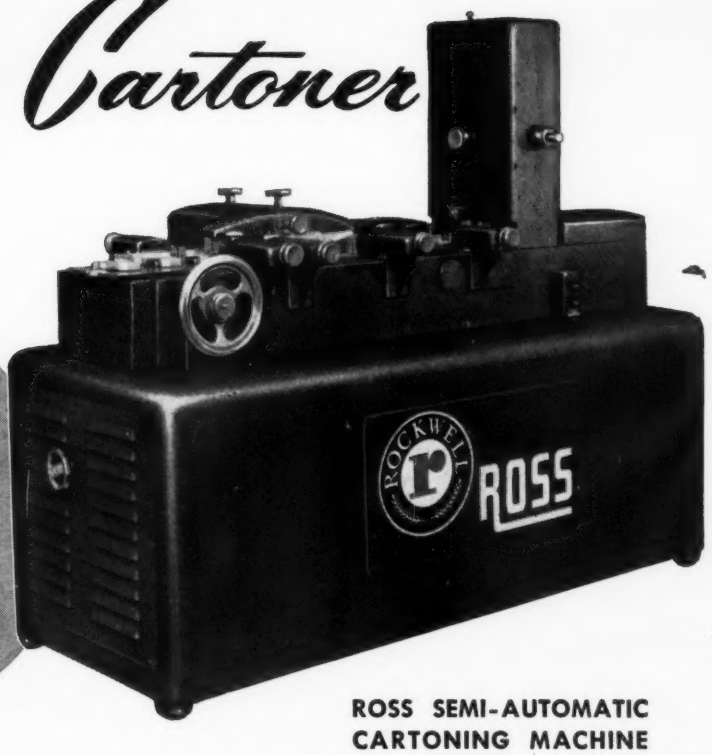


filling-machine hopper is loaded with the product to be packed and the carton-supply magazine with the collapsed carton blanks—the machine does the rest, delivering accurately filled and securely sealed packages ready for shipment.

The machine feeds collapsed carton blanks horizontally. In this position, the body of the carton is fully opened by mechanical means, all cartons being uniformly expanded or

This ROSS Cartoner





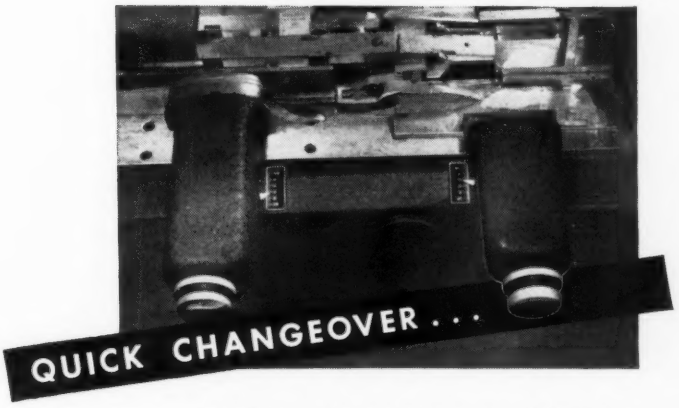
ROSS SEMI-AUTOMATIC CARTONING MACHINE

Will set up and tuck seal a wide range of various size cartons ready for hand loading or hand filling. Operating range is in excess of 120 cartons per minute. Fully automatic Ross machines that first load and then seal both ends of the carton are also available.

PAYS FOR ITSELF
out of savings

By keeping everlastingly busy . . . by cutting expensive downtime during carton size changeovers . . by saving manpower through eliminating manual setting up of cartons, ROSS CARTONING MACHINES PAY FOR THEMSELVES!

Seldom will you find any kind of a machine that gives a greater return on your investment. And you can't buy a better built machine. Parts are standardized; made to close tolerances. Vital moving units are self oiled. Master Speedranger control provides maximum flexibility. Mail the coupon today for complete information.



YOU DIAL IT LIKE A RADIO!

A change from one size carton to another can be made in a few minutes time *without* substituting interchangeable parts. It's done by simply resetting the position of dial controlled compounds that are permanently mounted on the machine bed.

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squared up. Then the narrow bottom flaps are folded into closing position, after which the cartons are deposited horizontally into receiving pockets carried by an endless conveyor chain.

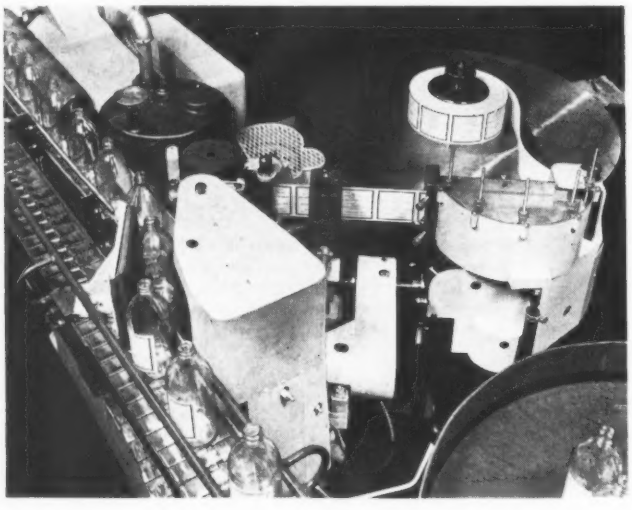
In the next step, the cartons are carried through the bottom sealing station where adhesive is applied to the inner and outer surface of the inner closure flap. The outer flap is folded into closing position and the carton, while still retained in the conveyor pocket, is turned upright for filling. At the filling station, a multiple-head, rotary-type machine with adjustable measuring pockets discharges a measured amount of material into the carton. Each pocket is equipped with a closure gate which automatically opens when a carton advances to the filling position. Thus, no spillage or premature discharge of material occurs if a carton is not in proper position.

From the filling station, the cartons are conveyed to the top closing and sealing station where the method of bottom sealing is repeated. The completed packages are then passed through compression belts which hold the sealed flaps squarely and firmly in place until the adhesive has set. The machine is continuous in operation and is said to attain exceptionally high rates of speeds by operation on several packages simultaneously.

It is designed to handle one size of carton only and contains no complicated mechanisms or difficult adjustments. Materials of construction were chosen for sanitation, long life at high speeds and simplicity in maintenance, according to the manufacturer.

ROLL FEED ON THERMOPLASTIC LABELER

New Jersey Machine Corp., Hoboken, N. J., announces that its Model 160 thermoplastic labeler is now available with a roll-label feed for spot labeling bottles at speeds up to 300 per minute. With the addition of the roll feed, the machine—



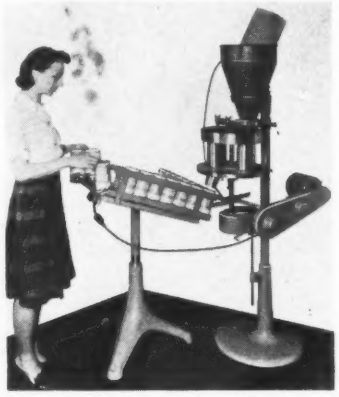
introduced over a year ago (see MODERN PACKAGING, March, 1947, p. 175)—takes labels in roll form, individually registers the labels, cuts them from the web and accurately applies them to bottles by means of heat sealing.

The economies of labels in roll form, the manufacturers state, come from the high speeds with which rolls of paper can be run through printing presses and the elimination of sheeting and label cutting, stacking and bundling. The storing of labels in tightly wound rolls is a space-saving feature and, in addition, the adverse effects of temperature and humidity in the storage area are avoided.

The machine is capable of taking rolls up to 30 in. in diameter. One such roll of labels, cut into individual labels 4 in. long, will keep the machine operating at a speed of 300 labels per minute for a period of over 2 hrs. without operator attention, it is stated. Since there is no glue to prepare and consequently no glue accumulation, the machine can run all day long and no night clean-up is required. The performance of this thermoplastic labeler is consistent because the waterless adhesive is applied on the labels by heat sealing.

AUTOMATIC CARTON FEEDER

Stuyvesant Engineering Co., Lyndhurst, N. J., announces an automatic carton feeder which is said to make possible a higher production capacity in the filling of dry and semi-dry products in cartons, cans, jars and other rigid containers.



The unit consists of a magazine feed which is used with the company's Fillmaster filling machines.

As shown in the accompanying photograph, the operator merely keeps the magazine filled with empty containers and after being automatically filled, they are pushed out of the side of the magazine, ready for the closing operation.

In instances where the filled container must be carried to the next operation on a conveyor, the carton feeder can be arranged to deposit the filled containers on a conveyor belt.

Only one operator is required for both feeder and filler. A vibrator can be supplied in the carton feeder to settle fluffy products. The entire feeder unit can be pushed out of the way when the filler is to be used for bag filling.

HOPPER FEED CONVEYOR

Frazier & Son, Belleville, N. J., announce a hopper feed conveyor to be used in conjunction with their Whiz-Packer filling machines. It consists of an endless belt conveyor equipped with scoops, buckets or cleats, closely synchronized with a variable speed control. An adjustable throat opening in the bin makes this equipment adaptable for a wide range of products. A feature is its automatic stop-start device which maintains constant hopper level and a wide feed range for small and large quantities. It is designed to eliminate shearing and breakage of the product and is said to operate without spillage or leakage outside of the conveyor or bin. The belt and buckets are easily removed

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At ANGELL—the Products Identification you need will be custom-made for you, to meet your ideas, to fit your product, to appeal to your market. Service is fast . . . prices are right . . . and satisfied customers number in the thousands.

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SIMPLY send us a rough sketch of what you need and tell us how it is to be used. ANGELL Artists will develop your ideas into a full color sketch . . . without obligation to you.

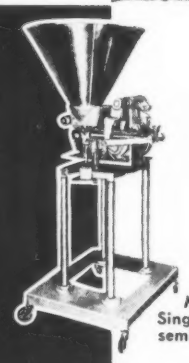
WE WILL submit design to you for approval, and recommend materials and processes to be used. If you have a definite design, ANGELL will show you how it can best be made.

AFTER APPROVAL—by you—ANGELL diemakers, with skill usually found only in the finest watchmakers' craft, turn out intricate embossed designs accurate in the most minute detail.

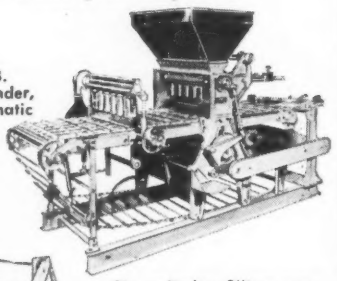
PRODUCTION SPECIALISTS finish ANGELL Products with rich lacquers and brilliant metallic inks. Materials range from lightest foil to .032 aluminum, brass, steel, bronze, zinc, chrome . . . designed for wide variety of applications.

GEYER
SINCE 1914
"WE'VE PACKED THEM IN FOR YEARS"

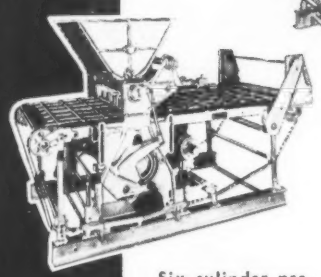
It is a matter of record that the "GEYER" Filling Machines have "packed them in" by solving packaging problems for the food industry over a period of thirty-three years.



Model B. Single-cylinder, semi-automatic



Six cylinder filling machine with jar cleaning device.



Six cylinder preserve and jelly filling machine.

Fillers are straight line multiple cylinders ... Designed for CLEAN CUT OFF FILLING for products that seek their own level ... BOTTOM UP FILLING for semi-solids ... No drip ... Clean Filling ... Entirely automatic ... Readily adjustable to any size or shape container ... Maximum production output.

YOUR NEEDS
Tell us what product you want to fill and the speed required.

THE MOST PROMINENT FOOD PACKERS USE GEYER FILLING MACHINES

JAMS	CHEESE	GREASE	PEANUT BUTTER
SYRUP	GLUE	LACQUER	APPLE BUTTER
JELLIES	PASTE	MAYONNAISE	VANISHING CREAM

AND SIMILAR PRODUCTS

THE FILLER MACHINE CO. INC.
1247 E. MONTGOMERY AVE., PHILA., PA.

Equipment and Materials
(Continued)

for cleaning, with ample adjustment for belt stretch. The bin is lined with stainless steel and has smooth contours throughout to facilitate cleaning.

NEW BEVERAGE BOTTLE

Thatcher Glass Mfg. Co., Inc., Elmira, N. Y., announces a new beverage bottle with a special wall construction to resist breakage. Called "Wedg-Wall" to designate the wedge-shaped side walls which gradually increase in thickness from the shoulder to the base of the bottle, this type of bottle structure is said to offer protection against breaking shocks caused by higher internal pressure, extreme temperature changes or rough handling.

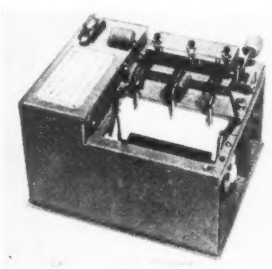
Available at no increase in price for all types and sizes of beverage bottles, the new construction, according to the manufacturer, strengthens the corner at the bottom of the bottle where tests show most shocks are received from handling, washing and carbonation pressures. The weight distribution also gives a lower center of gravity for better balance and easier handling.

SARAN PRICE REDUCED 25%

Dow Chemical Co., Midland, Mich., announces a reduction of approximately 25% in the price of its saran film 517 and Type M. The film, known for its chemical resistance, low moisture permeability and toughness, is currently available in gauges from 50 through 200 in rolls up to 40 in. wide and in seamless tube "flats" from 6 through 32 in. wide.

MATERIALS HANDLING RECORDER

A device for recording impact, acceleration and gravity shocks received by packaged merchandise has been announced by Analysis Sales Co., Cleveland, Ohio. The recorder illustrated may be placed inside a container with the merchandise or sent as a package by itself. Made of duraluminum, it weighs less than 7 lbs. and occupies a space $7\frac{1}{2}$ by $6\frac{1}{2}$ by $6\frac{1}{2}$ in. It is activated by a spring-wound clock which is wound by a dry cell battery. The clock moves a recording tape at a known set rate of travel under the pictured fingers. The entire unit is self contained.



GOLD LEAF STAMPING MACHINE

Printing Industries Equipment, Inc., New York, announces an automatic machine for high speed gold leaf stamping which is engineered to do 40 or more covers per minute. Simple in design and sturdy in construction, the Stamp-O-Matic incorporates new features in hydraulic, mechanical and electronic operation, the makers claim.

CORRUGATED CONTAINERS

. . . Low Cost Salesmen Who Really Produce

A PRODUCT WORTH MARKING IS WORTH MARKING WELL

The cost of imprinting an effective selling message on your corrugated containers is negligible. But that little cost can pay off in rich dividends of increased sales—if the message is a good one.

Matthews will MAKE your message good. The entire job, from original idea and design through to the rubber printing dies your box maker needs for the reproduction, will be handled by experts. Your message will be created and styled by Matthews special Box Design Service. Our skilled Rubber Die Department will do the rest.

We'll be glad to submit sketches and cost estimates to you. Just contact your nearest Matthews plant or sales office, or write for complete details.

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How to keep a product in the Swim!

AQUA-TITE SWIM CAPS IN GEO. V. CLARK *SEE-THRU* PACKAGE

-Sell by the "See"

WELL-DRESSED for their plunge into the competitive sea, Aqua-Tite Caps are real show-offs in See-Thru containers by Geo. V. Clark. No wonder the tide turns their way when customers eye . . . and buy.

DESIGNING AND CREATING PACKAGES that catch the buying eye has been a Geo. V. Clark tradition for 60 years. So has quality production. And Clark's uniformly high standards have successfully solved the "how-to-be-seen" problem for everything from caps to corkscrews.

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Maybe *your product* can benefit from this accumulated know-how. To learn how, clip and mail the coupon. GVC

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Gentlemen: Send us details of your See-Thru packaging. I am interested in rigid, transparent packaging for

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Acetate to Paper in colors
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Foil, Kraft, Cloth Packaging Materials
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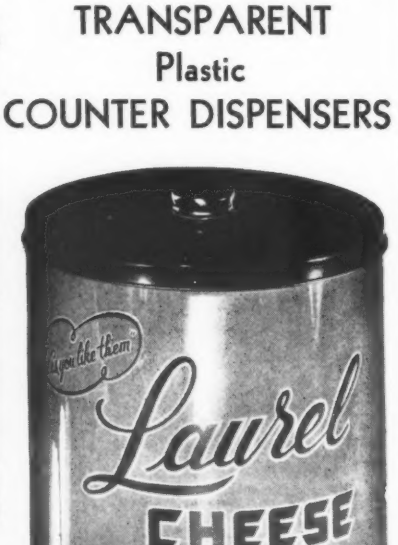
TRANSPARENT
Plastic
COUNTER DISPENSERS



Fine for promoting the sale of Cookies, Potato Chips, Pretzels, Confectionery, Nuts, Notion specialties, etc.

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Polyisobutylene in waxes

(*Continued from page 162*) Arwax films. In a series of tests, TiO_2 pigment and lithopone were used as the filler in a composition of 25% Arwax 612-5, 10% Arwax 612-6 and the balance 140 deg. F. E.M.P. paraffin wax. Data indicate that up to 15% fillers added to the wax-polymer blends do not change the WVP results. Fillers were found to have no accelerating effect on the viscosity breakdown. Some results are shown in Table IV.

TABLE IV—WVP OF ARWAX — TIO_2 BLENDS OF GLASSINE

Blend	*Wax coat #/ream*	*Permeability g./in.²/hr.*
25% Arwax 612-5, 10% Arwax 612-6, 65% 140 deg. F. paraffin wax	12.5	0.087
Same + 10% TiO_2	12.3	0.086
Same + 15% TiO_2	12.1	0.088
Same + 15% lithopone	11.7	0.078

For this test, test cups (containing water) were held at 88 deg. F., with a maintained vapor-pressure difference of 28 mm. Hg. Air flow was calculated to be 20.0 ft./min.

Acknowledgment

The author is grateful to T. C. Edwards (Enjay Co.) and D. W. Young (Standard Oil Development Co.) for helpful discussion during the course of this development work.

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4. Vore, U. S. Patent 2,325,085 (1943).
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6. Tressler, D. K., and Evers, C. F., *Paper Trade Journal, 101*, (No. 10) 33–35 (1935).
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World tin production up

World production of tin may rise as high as 160,000 tons during 1948, according to Erwin Vogelsang, chief of the Tin and Antimony Section, Department of Commerce.

Mr. Vogelsang's encouraging prediction is based upon the assumption that political stability prevails "in Bolivia and the Far Eastern tin producing countries."

Tin production figures for 1947 are not yet complete, but present returns indicate that the total will not exceed 110,000 tons. This compares with 87,000 tons produced in 1946.

Kodak

THE OUTSTANDING THING about an individual "showcase" made of Kodapak Sheet is the product that's presented in it—this pipe, for example.

Kodapak Sheet invites inspection of every detail of the product. Yet this sparkling, optically clear, durable packaging keeps the product new, clean, and safe—well protected from the store wear and unnecessary fingering that so frequently interfere seriously with a product's salability.

Kodapak Sheet is supplied in two forms: Kodapak I, cellulose acetate, in gauges from No. 88 (0.00088″) to 20 thousandths (0.020″); Kodapak II, cellulose acetate butyrate, in gauges from No. 90 (0.00090″) to No. 200 (0.00200″).

If you want to learn more about this versatile material, the Kodapak Demonstration Laboratory in Rochester is available to demonstrate fabrication possibilities and uses. Write for an appointment.

CELLULOSE PRODUCTS DIVISION
EASTMAN KODAK COMPANY, ROCHESTER 4, N. Y.

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you can do—

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- ★ Spread Coating
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you can get—

- ★ Greater Tear Strength
- ★ Greater Wet Strength
- ★ Grease Resistance
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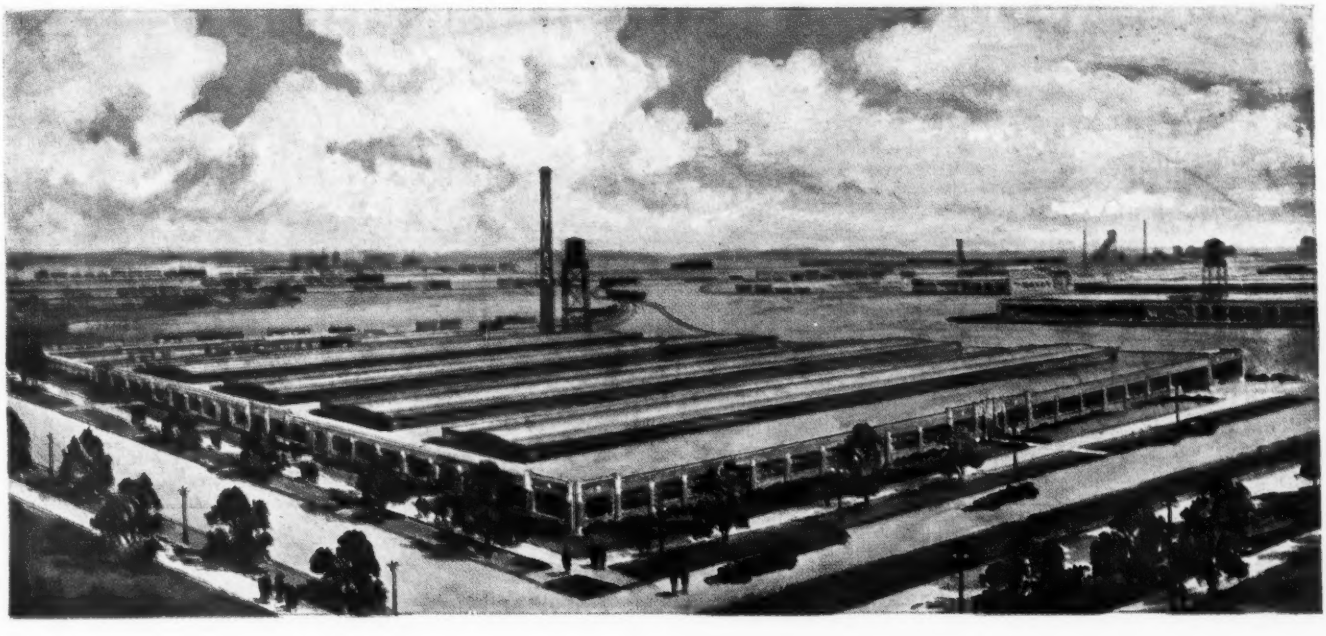

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See the New, Improved
WRAP-O-MATICS in operation . . .

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CONFECTIONERY INDUSTRIES EXPOSITION

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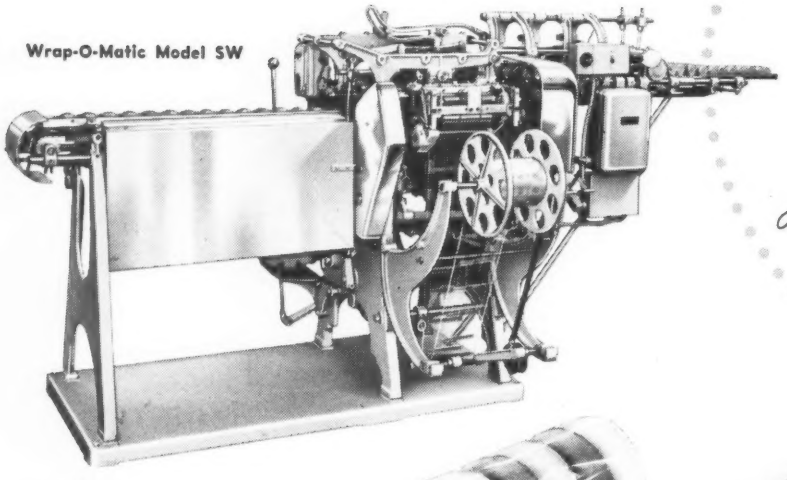
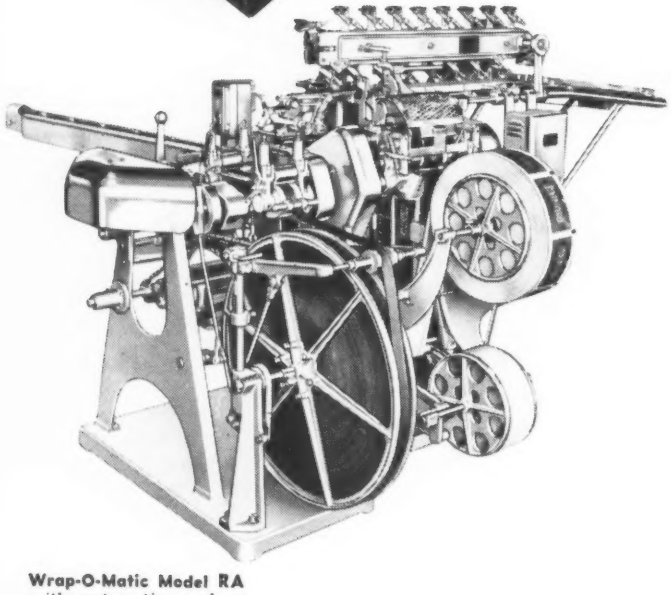
June 20-25, 1948 New York City

BOOTHS 1, 2, and 3



Wrap-O-Matic Model SW



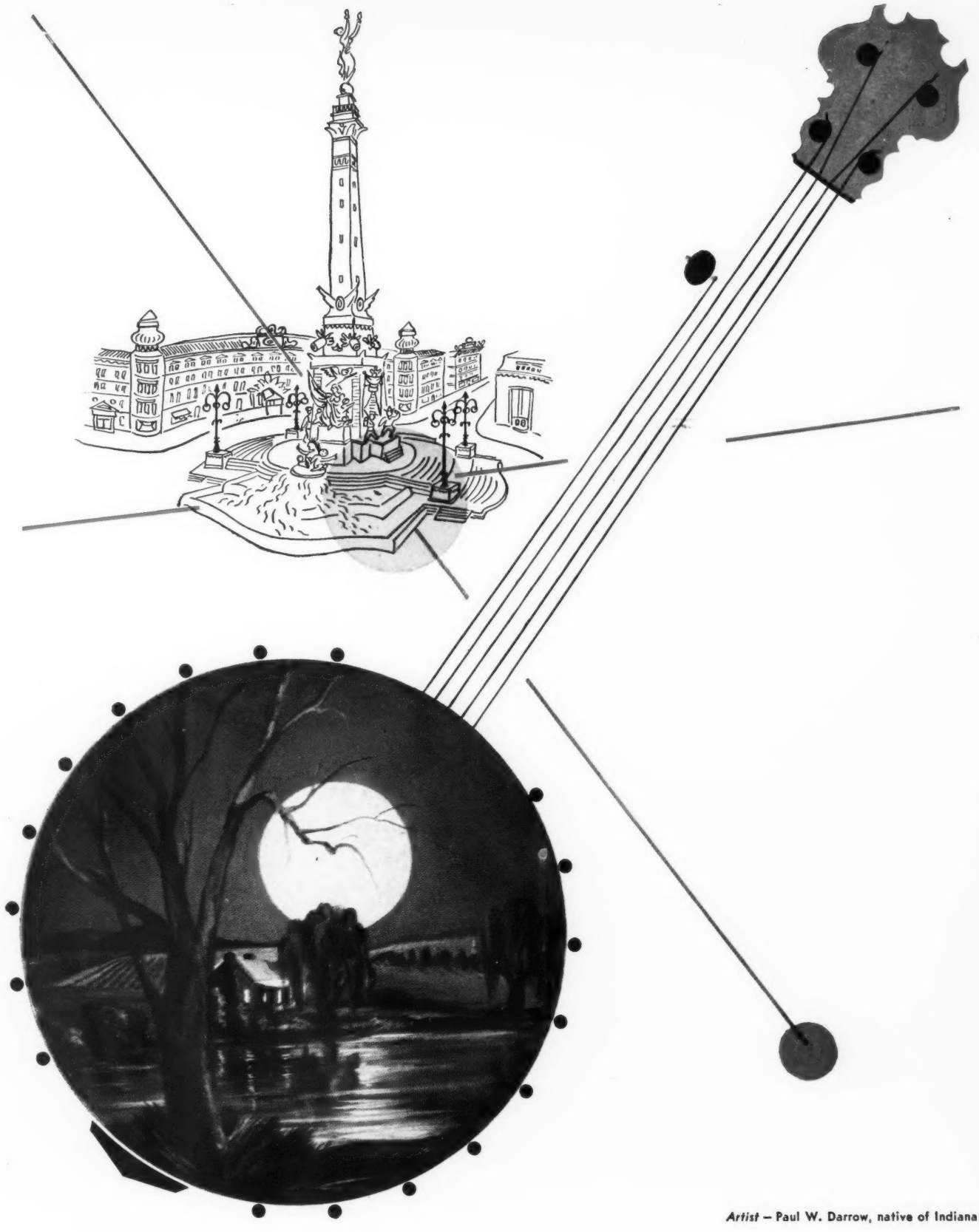
Wrap-O-Matic Model RA
with automatic card or boat former and feeder

These two Wrap-O-Matic machines will be in operation, wrapping popular confectionery products at the Confectionery Industries Exposition. Be sure to see them and learn how the high-speed, economical wrapping of Wrap-O-Matic saves as much as 75% in wrapping labor and 35% in wrapping material.

You are cordially invited to make our booth your headquarters. Bring samples of your products and our engineers will show you how Wrap-O-Matic can handle your wrapping operation.

LYNCH CORPORATION

Package Machinery Division TOLEDO 1. OHIO U. S. A.



Artist – Paul W. Darrow, native of Indiana

INDIANA — *Annual purchases: $2¾ billion — mostly packaged.*

CONTAINER CORPORATION OF AMERICA

Plants and People

Appointment of **Earl D. Steimer** as Pacific Coast market development manager for **Owens-Illinois Glass Co.** has been announced. He succeeds **Bert Van Cleve,** who has been named managing director of the Olive Advisory Board. Mr. Steimer joined the company as field supervisor at its San Francisco office in 1946.

E. D. Steimer

P. B. Niles

New public relations director for **Owens-Illinois Glass Co.,** Toledo, Ohio, is **Philip B. Niles.** Mr. Niles, who joined the company several months ago, was formerly vice president of the American Water Works Co.

The Conveyor Co. of Los Angeles, vegetable packing equipment manufacturer and supplier, has opened a new branch office at 240 Abbott St., Salinas, Calif. **Ray W. Brady,** the company's Northern representative, will be in charge. An inventory of equipment will be carried for the convenience of Salinas growers, shippers and packers and the company will supply repair parts or complete packing sheds.

Transparent-Wrap Machine Corp., manufacturers of the "Transwrap" machine, announce the opening of offices at their new assembly plant at Henry Street and Route 17, Hasbrouck Heights, N. J.

The **Brown-Bridge Mills, Inc.,** manufacturer of gummed tapes and papers, Troy, Ohio, announces three additions to its sales staff: **Jerome Kinoy,** New York office; **Tom S. Rowlett,** Chicago office, and **Alan Crowley,** who will cover Tennessee, the Gulf and South Atlantic States.

Joseph P. Henneberry has been appointed manager of the Envelope Adhesive and Dextrine Sales Department of **Paisley Products, Inc.,** Chicago, subsidiary of Morningstar, Nicol, Inc.

Oscar Trilsch Co., Whitestone, N. Y., manufacturers of set-up boxes, have opened a New York office and showroom at 366 Fifth Ave. The telephone number is Longacre 4-3328.

The **Hill-Hentschel Co.,** St. Louis, Mo., announces the purchase of the **Artcraft Ink Co.,** New Orleans, La.

A new paperboard machine at **American Coating Mills,** Division of Owens-Illinois Glass Co., Elkhart, Ind., started in operation May 1. According to the company, the machine, which has been under construction for the past two years, will double the plant's capacity for producing clay-coated and other grades of folding boxboard.

Morehead Patterson has been re-elected chairman of the board of **American Machine & Foundry Co.,** New York. **George Arents, George S. Hastings, Daniel H. Haynes, George S. Hills, John W. Hooper, Knox Ide, C. W. LaPierre, Herbert H. Leonard, Martin Miller** and **Roland P. Soule** were re-elected as AMF directors.

Frank Condon, package development and design, has moved to new offices at 331 W. 87th St., New York.

The Glenn L. Martin Co. Chemicals Division at Painesville, Ohio, made its first shipment of vinyl chloride resin (Marvinol VR-10) recently. The new plant is expected to produce 25,000,000 lbs. of this thermoplastic resin yearly.

Charles S. Traer has been elected chairman of the board of **Acme Steel Co.,** Chicago, following the retirement of **Ralph H. Norton.** Mr. Traer is succeeded as president by **Carl J. Sharp. Chester M. MacChesney** has been elected executive vice president and **John Ekern Ott** is now a vice president. The board of directors has been increased from nine to 11 members. All former members were re-elected and the two new members are **Allen B. Wilson** and **Christopher D. Norton.**

Ralph R. White, New England manager of **Sealright Co., Inc.,** Fulton, N. Y., was honored for his 25 years of service with the company at a luncheon held at the Waldorf Astoria, New York, last month.

Howard C. Peterson, Jr., has been named Metropolitan sales manager for **Arkell & Smiths,** Canajoharie, N. Y., manufacturers of the new Sta-Stak flour and fertilizer bags. His office is at 500 Fifth Ave., New York.

The Freight Loading and Container Section of the **Assn. of American Railroads** announce that **A. M. Fielding,** Pacific Coast district representative, and **W. G. Paradise,** container engineer, are now located in the Pacific Electric Bldg., 610 S. Main St., Los Angeles.

Frank E. Golliher has been named production supervisor of **General Electric Co.'s** plastics division in Pittsfield, Mass.

David B. Folkerth has transferred from the company's plastics sales office at Pittsfield to Pittsburgh, Pa., where he will be district representative for the Chemical Dept.

Charles W. Bentley has been appointed assistant to the manager of GE's new Decatur, Ill., plastics molding plant.

Arthur V. Todd has been appointed central New York representative for **Steiner Plastics Mfg. Co., Inc.,** Long Island City, N. Y., plastics fabricators. He will cover the area surrounding Buffalo, Rochester, Syracuse and Utica.

Lamson Corp., Syracuse, N. Y., and **Production Aids, Inc.,** Van Nuys, Calif., have jointly announced an exclusive arrangement whereby Lamson Corp., makers of conveyor equipment, will handle sales, service and engineering of the new automatic pallet loader made by Production Aids.

I. F. Schnier Co., Inc., closure manufacturer, has combined its Seattle office and warehousing facilities into a complete branch office at 116 Fifth Ave. North. **Thomas B. Hill, Jr.,** is manager of the branch.

C. M. Connor, formerly with the Glassine Paper Co., has joined **The Ohio Boxboard Co.,** Rittman, Ohio, as manager of the research and development department. He suc-

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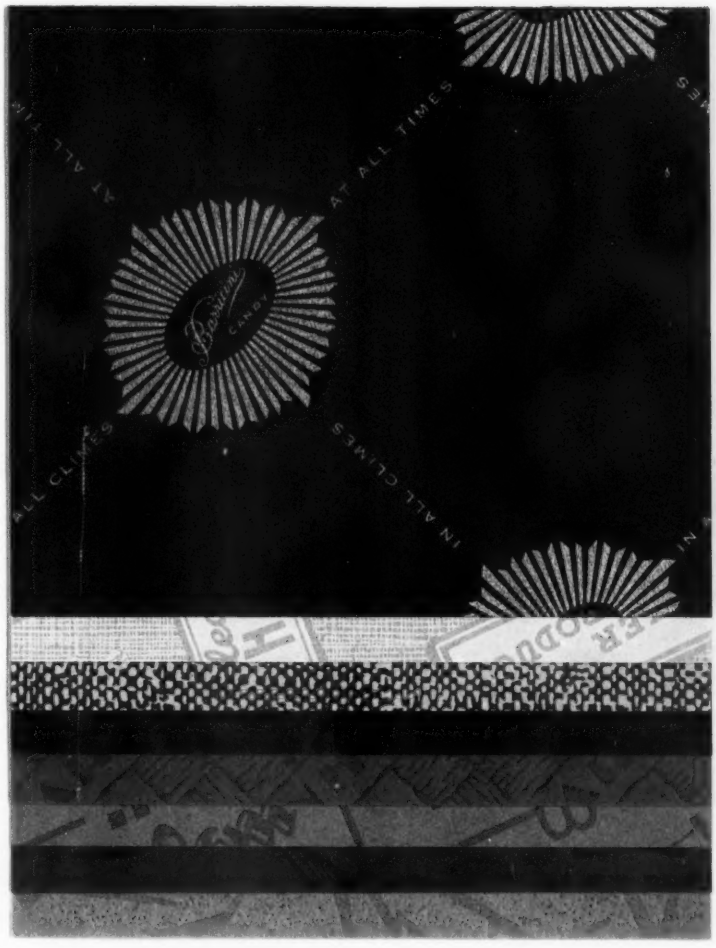

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- ★ Automatic overflow
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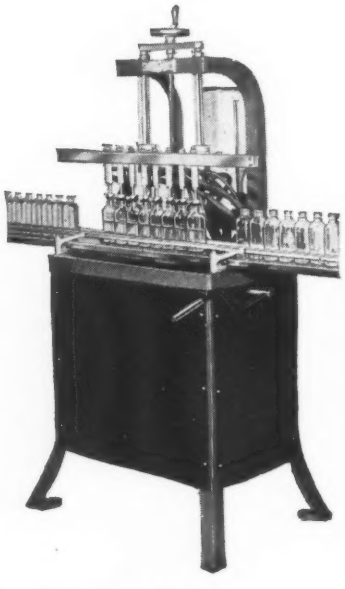
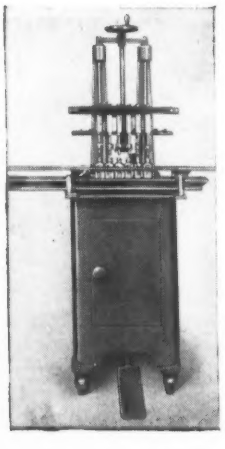
All-purpose, versatile vacuum filling machine for thin-to-viscous and foamy liquids. Full range of containers from 1 oz. to 1 gal. in glass, and up to quarts in metal.



mrm Model "B"



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SMALL
— ADAPTABLE —
INEXPENSIVE

4-6 Spouts

Mounted on casters, specifically designed for short and varied production runs. Fills a full range of containers from 1 oz. to 1 qt.

WRITE FOR DETAILS—NO OBLIGATION

PROMPT DELIVERIES

NO SKILLED OPERATION
or MAINTENANCE NEEDED
PARTS ARE SIMPLE—
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Consult Us on Your Packaging Problems

mrm CO. INC. Dept. MP-68
custom designed and built fillers and conveyors
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EVergreen 7-3936

Plants and People
(Continued)

ceeds **J. C. Morris** who is now in the production division.

Paul J. Pauline and **Robert E. Wilson** have been appointed representatives in the poultry products department of **Wabash Fibre Box Co.,** Terre Haute, Ind.

Plastic & Die Cast Products Corp., makers of plastic and metal packages and other products, has changed its name to **Eldon Manufacturing Co.** The company's address is still 1010 E. 62nd St., Los Angeles.

Norman Olsen, sales manager of **Aluminum Seal Co.** of Richmond, Ind., a subsidiary of Aluminum Co. of America, has been made vice president in charge of sales for the company. Mr. Olsen joined the Aluminum Co. in 1925 and became sales manager of the Seal Co. last year.

N. Olsen

Triangle Package Machinery Co., Chicago, manufacturers of filling machinery and carton sealing equipment, announces an expansion and consolidation program which includes the construction of a new building at 6630–6650 W. Diversey Blvd., Chicago, which will have double the present facilities of the company's two existing Chicago plants. The building is expected to be completed in September.

A $30,000,000 program for expansion of research facilities of **E. I. du Pont de Nemours & Co., Inc.,** at Wilmington, Del., has been approved by the firm's executive and finance committees. On completion of the project, the firm's Wilmington Experimental Station will be one of the largest research establishments in the world.

Factory and offices of the **W. E. W. Container Co.,** paper and cellophane converters, have been moved to 751 De Kalb Ave., Brooklyn. Telephone is Evergreen 8-0826.

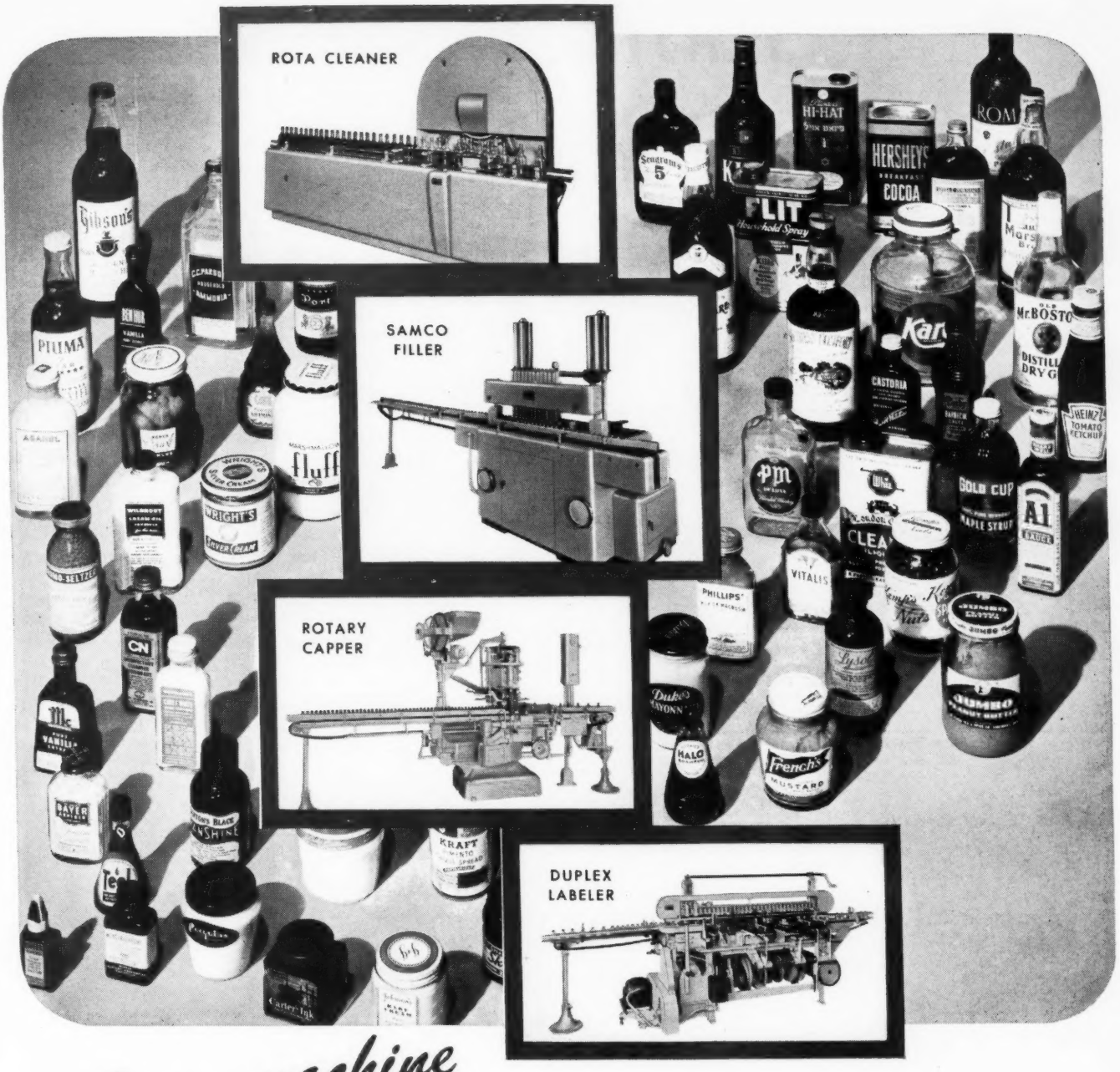
Standard-Knapp Corp., Portland, Conn., subsidiary of **Hartford-Empire Co.,** is taking over the manufacturing, selling and servicing of Hartford-Empire's unscramblers, pocket washers, enliners, pre-labeling driers and conveyors.

Sun Chemical Corp., New York, has announced a consolidation of management for their **Fuchs & Lang** and **Rutherford Machinery** divisions. Fuchs & Lang supplies lithographic inks, while Rutherford specialized in machinery for the lithographic industry.

Sylvania Div., American Viscose Corp., has opened a new warehouse in Atlanta, Ga., constructed specifically to store cellophane under controlled temperatures. Cellophane cutters and sheeting machines have been installed and slitting equipment will be added. **Charles Thompson** is in charge of operations.

Arthur L. Smith has been promoted to Eastern sales manager of the **Paterson Parchment Paper Co.,** Bristol, Pa. He will make his headquarters at the company's New York office, 120 Broadway.

Collins F. Fuller has joined the staff of the **Quartermaster Food & Container Institute** as chief of the Container Analysis Division, Container Laboratories. Mr. Fuller founded the Wood & Fiber Products Co. and has been associated with Fuller Box Co., American Boxboard Co. and



Four-machine Team for TOP BOTTLING EFFICIENCY

The containers pictured here are only a small part of the multitude of jars, bottles and cans that are — either in whole or part — cleaned, filled, capped and labeled on Pneumatic equipment.

These four Pneumatic machines represent the peak of present-day efficiency in their various operations. Together they combine to form a streamlined, smooth running "Team" that, on the basis of experience-records, leads the field in "lower cost per container" performance. PNEUMATIC SCALE CORPORATION, LTD. Main office: 82 Newport Avenue, North Quincy 71, Massachusetts. Branch offices: New York, Chicago, Los Angeles, San Francisco.

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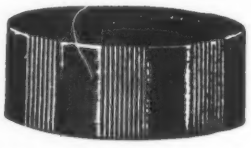
PACKAGING AND BOTTLING MACHINERY

Over ninety different machines for the packaging of dry, free-flowing products and the cleaning, filling, capping and labeling of containers for liquids and semi-liquids

PLASTIC CAPS



• FOR BOTTLES
• FOR CANS
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ALL STANDARD SIZES AND COLORS AVAILABLE FROM STOCK

VOLUME PRODUCERS OF ALL SMALL THERMO-SETTING PLASTIC PARTS

LET US QUOTE ON YOUR CUSTOM CLOSURE, INHALER, OR ELECTRICAL MOLDING

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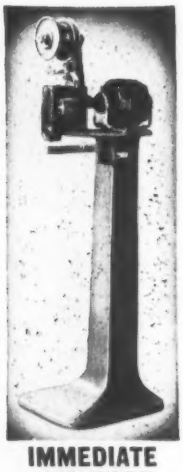
REVOLUTIONARY!

New PIONEER WIRE STITCHER

Contains 50% fewer working parts

LESS MAINTENANCE • SIMPLER TO OPERATE



IMMEDIATE DELIVERY
$225

The Pioneer Wire Stitching Machine, Model A, is designed with fewer parts that might wear out and necessitate costly repairs. It was developed by experts with more than 30 years in the wire stitching field and is built for fast, smooth operation.

Examine the features of this outstanding machine

1. New patented spool tension device—prevents kinking of wire.
2. Long lasting carbide cutters.
3. Parts hardened throughout.
4. Smooth functioning roller bearings.
5. Working parts and clutch housed in one compact unit.

Write today for complete details.

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Plants and People
(Continued)

the Forest Products Laboratory in Madison, Wis. **Fred W. Stenze, Jr., and Sam J. Renz** have joined the Institute's Packing and Crating Branch as packaging engineers.

Edmund Hoffman has been elected secretary and treasurer of **American Can Co.** He succeeds R. A. Burger, who is retiring after 47 years with the company. Mr. Hoffman has been manager of the industrial relations department since 1944.

E. Hoffman

Chase Bag Co., Chicago, has purchased the factory and manufacturing facilities of **Southern California Bag Co.,** Los Angeles. This acquisition brings the number of Chase plants to 15. **R. R. Koch,** sales manager of Chase's Portland, Ore., branch, has been named manager. **Arthur W. Lane,** as well as Southern California Bag Co.'s entire staff, will remain with Chase in their present capacities.

At the Chase plant in Chagrin Falls, Ohio, a new high-speed Fourdrinier machine is being installed to increase production of spun kraft paper for open-mesh bags.

A new **Continental Can Co.** paper converting plant for the manufacture of fibre shipping drums is now under construction on the outskirts of St. Louis, Mo.

Sam Schuller has been named as technical director of the combined operations of **Paisley Products, Inc.,** adhesive manufacturers, Chicago.

Charles A. Lewis is now on the staff of **C. P. Redick,** chief of the General Products Section, U. S. Dept. of Commerce. Mr. Lewis, a container specialist, is known for his wartime service as a member of the Container Division of WPB.

Carr Sherman, president, **L. M. Burgess,** acting technical director, and **Joseph Lawlor,** factory manger of the **H. P. Smith Paper Co.,** Chicago, have returned from England where they surveyed developments in paper processing.

Announcement has been made of the organization of **Green Bay Paper & Pulp Co.** at Green Bay, Wis., The new mill will be used primarily to supply raw materials for its sister company, **Green Bay Box Co.,** which manufactures shipping containers and folding boxes. **George Kress,** president of the box company, will head the new firm. The mill has agreed to make test runs of wood pulp for other paper producers in the Fox River Valley with a view to determining how semi-chemical pulp can be utilized for various paper products.

Marathon Corp., Menasha, Wis., manufacturers of food packages and packaging materials, expects construction of its new building for ink manufacturing operations to be completed by fall. Completion of a modernization and enlargement program at the Menominee, Mich., plant of Marathon has been announced. Principal unit in the installation is a new Fourdrinier paper machine.

George W. Mabee, chairman of the board of directors of the **National Folding Box Co.,** New Haven, Conn., died May 11. Long active in the packaging industry, Mr. Mabee served as a director of the National Paper Box Assn. and the Carton Development Corp.

BLUE...

stops the eye... starts the sale

PACK TO ATTRACT IN

Maryland Blue

"That's it"... see other side

NATURALLY your product will stop more shoppers . . . and build more business . . . when it's packaged in rich, royal, "eye-stopping" Maryland Blue Glass. Here's why

that's it

IN THE BLUE BOTTLE

BLUE makes your product easier to see.

BLUE makes your product easier to remember.

BLUE makes your product smartly modern.

BLUE insures rich, distinctive appearance.

BLUE stands out, assures better display.

BLUE advertises your product in the home.

BLUE builds profits, steps up repeat sales.

Write today . . . tell us the nature of your product and the sizes in which it is packed . . . and let us send you samples of appropriate stock designs. Or, if you use bottles or jars in large quantities, we'll be glad to create a special design for your exclusive use.

MARYLAND GLASS CORP.
BALTIMORE 30, MD.

PICTURED ON THE PRECEDING PAGE

are just a few of the handsome stock designs. This diagram makes them easy to identify.

1. French Square - - - in ¼ oz. to 16 oz.
2. Maryland Oval - in 1⅞ dram to 32 oz.
3. Cabinet Square - - - in ½ oz. to 32 oz.
4. Chesapeake Oval - - in 4 oz. to 32 oz.
5. Squat Jar - - in 2 5/16 dram to 18 oz.

ALSO AVAILABLE IN CLEAR GLASS

pack to attract in *Maryland Blue*

For Consumer Size

ECONOMIZE WITH

Bemis Deltaseal Bags

THE SMART-LOOKING PACKAGE WITH SALES APPEAL

Deltaseal: Reg. U.S. Pat. Off.

Many products such as sugar, flour, rice, salt, beans, corn meal and cereals are packed in Deltaseal Bags with savings in packaging costs that will amaze you.

Your brand will be rich and colorful on the excellent printing surface of Deltaseal Bags.

Deltaseal Bags and the Deltaseal Packaging System permit major operating economies in your plant. Your Bemis representative will give you all the details.

Deltaseal Bags have the handy pouring spout and are available in sizes from 2 lbs. to 25 lbs.

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Prefer Products in Tubes

YOUNG MODERNS, like millions of others, have been quick to adopt the convenient collapsible tube habit. Products ranging from Deodorants for men and for women, to Dental Creams, gain quick acceptance when packaged in these handy containers. Sturdy, compact, ideal for care-free packing in travelling bag or medicine chest. Manufacturers like their light weight for shipping economies, their sturdiness for cutting returned goods losses, and *New England's* exclusive "VINICOTE" Inner Coatings which permit packing products in Collapsible Tubes without danger of creep or reaction to tube metal. Fine uniform quality, and crisp, clean tube decoration are other important advantages in specifying "NEW ENGLAND" when you buy Collapsible Tubes. Discuss *your* tube packaging problems with one of our trained field men. Phone, or write, *now.*

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NEW ENGLAND COLLAPSIBLE TUBE CO.

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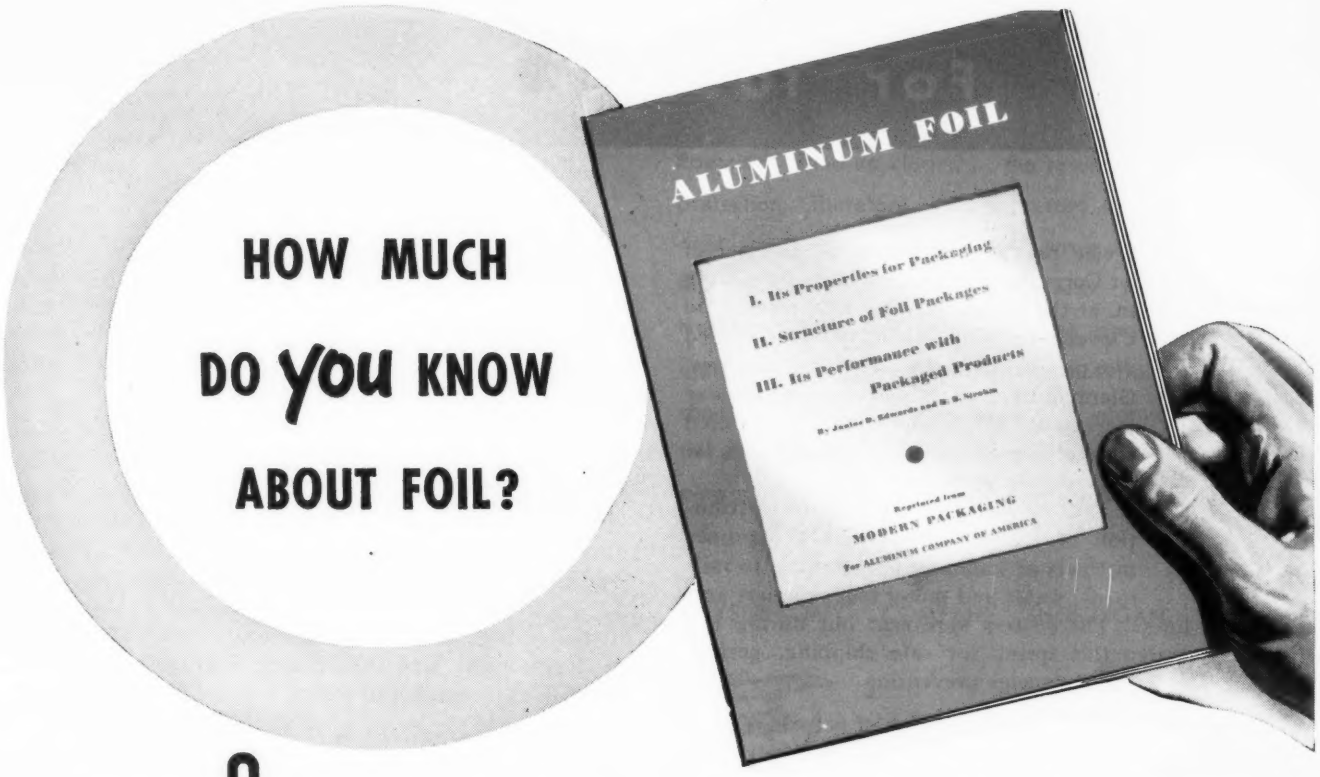

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The technical editor of a leading packaging magazine predicts this series "will stand as the definitive reference on this subject for a long time". So for quick, informative reading . . . for your reference files . . . send for the free ALUMINUM FOIL PACKAGING RESEARCH REPORTS. Write to ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh 19, Pennsylvania.

ARTICLE 1.
Data on mechanical properties, water-vapor transmission rates, reflectivity for light and radiant heat, hygienic characteristics, resistance to corrosion, and other vital information.

ARTICLE 2.
Structure of foil packages—efficiency of various types of closures in excluding moisture; mechanical strength of heat-sealed joints; moisture excluding efficiencies of bags and cartons; cooling rates of cartons with and without foil liners.

ARTICLE 3.
Discusses intensive laboratory tests which show value of aluminum foil in the packaging of typical products, from cigarettes to sterling silver.

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ALCOA ALUMINUM FOIL

THE QUALITY PACKAGING MATERIAL FOR QUALITY PRODUCTS

For Your Information

R. F. Gumbert, vice president and general manager of Plyfiber Container Corp. was elected president of the **Fibre Drum Mfrs. Assn.** at the annual meeting held recently in Cleveland. **W. J. Mahoney** was re-elected vice president and **R. C. Carlson,** treasurer. **Glenn Mather** was appointed to continue as secretary. Mr. Mahoney was also elected a director, together with **C. E. Eggerss,** for a three-year term.

R. F. Gumbert

The association reports wide distribution of its posters showing the proper methods of handling fibre drums, to railroads, water and motor truck carriers and air freight lines. The posters were sent out during the annual campaign this spring for safe shipping, perfect shipping and loss and damage prevention.

A summary of the major industrial uses of polyvinyl alcohol resins is given in a new booklet, "'Elvanol' Polyvinyl Alcohols," published by **E. I. du Pont de Nemours & Co., Inc.** The ways this plastic resin can be utilized in adhesives and binders, textile sizing, paper sizing and coating, molded products and film, protective coating and as emulsifying and thickening agents are listed. The booklet gives the physical and chemical properties and commercial grades of the Elvanol. Copies may be secured by writing the company at Wilmington, Del.

Adhesive Products Corp., 1660 Boone Ave., New York, announces that its new booklet, "Unusual Adhesive Products," is now available. Requests for copies should be sent to the company.

During a special meeting held recently in Chicago, the **Lithographic Technical Foundation** elected **Don H. Black** of **Western Printing & Litho. Co.** president. **George Schlegel, III,** of **Schlegel Lithographing Corp.** was elected vice president; **Charles W. Frazier, Brett Lithographing Co.,** treasurer, and **Charles P. Schmid, Trautmann, Bailey & Blempey,** secretary. Executive director is **W. E. Griswold.** New directors elected were **Ralph D. Cole, B. E. Callahan, John L. Kronenberg, Harry E. Brinkman, Frank A. Myers** and **Joseph P. Thomas.**

Kimberly-Clark Corp., Neenah, Wis., acted as host when the Wisconsin chapter of the **Industrial Packaging Engineers Assn. of America** visited the firm's Lakeview mill and saw the manufacturing process for its creped wadding products. A dinner meeting followed the tour.

The **F. M. Kirk Molding Co.,** Clinton, Mass., has recently added a new division for short runs of injection molded plastic products, packages or parts. The service is designed for companies primarily wishing to test new products from a technical or marketing standpoint. A brochure describing the facilities may be obtained from the company without charge.

Cellulose Products Sales Division of the **Eastman Kodak Co.,** Rochester, N. Y., has published a new report on the properties and performance of its thermoplastic cellulose ester (Kodapak). The report is well illustrated and concise with explanatory charts. Covers of the booklet are laminated with the sheet and have striking full-color photographic reproductions. Copies are available upon request to the company.

William A. Coulter of the Manufacturers Box Co. was elected chairman of the New England division of the **National Paper Box Mfrs. Assn.** during the annual meeting in Providence, R. I. **M. S. Moore** of Consolidated Paper Box Co., Somerville, Mass., was chosen vice chairman and **Thomas Casey Greene** was renamed secretary-treasurer. Directors elected were: **Ralph L. Harden, C. Lloyd Claff, Benjamin Nigrosh, Leonard L. French, C. Knowlton Shaw, Jr., Raymond H. Dowd** and **Martin V. Dunning, Jr. E. A. Little** was elected liaison officer.

A group of technologists in the lithographic and allied industries have formed a new organization, as yet unnamed, to improve the coordination and dissemination of research knowledge in the field. The organization meeting was held during a recent three-day forum of the Lithographic Technical Foundation's research committee in Chicago recently. **Michael H. Bruno,** research manager of LTF, was elected president; **William H. Wood** of the Harris-Seybold Co. was elected vice president and **George Wilhelm** of Rand-McNally was elected temporary secretary-treasurer. A five-man board of directors will be appointed by the president.

Three reports titled "Strippable Protective Spray Coatings" have been published by the **Office of Technical Services, U. S. Dept. of Commerce,** Washington 25, D. C., dealing with research to develop a strippable coating resistant to corrosion, etc., easy to apply by unskilled personnel, safe to use on metal and wood surfaces, and easily stripped

What's doing

June 13–17—**National Candy Wholesalers Assn., Inc.,** Sherman Hotel, Chicago.

June 14–15—**American Marketing Assn.,** conference, Hotel Statler, Washington, D. C.

June 20–24—**National Assn. of Retail Grocers,** Convention Hall, Atlantic City.

June 20–25—**National Confectioners' Assn.,** convention and exposition, Waldorf-Astoria Hotel and Grand Central Palace, New York.

June 21–25—**American Society for Testing Materials,** annual meeting, Book-Cadillac Hotel, Detroit.

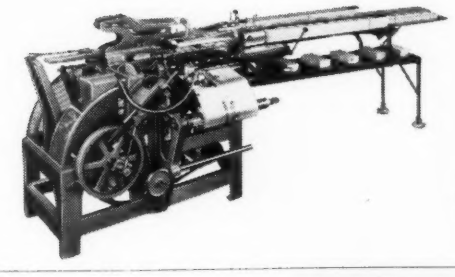
July 12–14—**Grocery Mfrs. of America,** mid-year meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

DELIVERED FRESH!

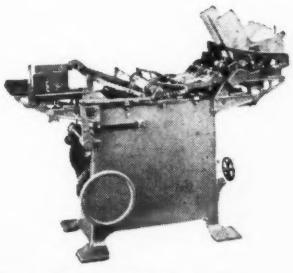
There is nothing worse, to a cigar smoker, than a flavorless, dried-up cigar . . . the result of improper protection. Therefore, it is important to select the right wrapping material and to wrap the box, so that the cigars will arrive factory-fresh. We have a Hayssen Carton Wrapping Machine model that is equipped to handle the wrapping material of your choice. Write the factory for further information on this and other Hayssen automatic, adjustable wrapping machines. An outline of your requirements will bring specific recommendations.

HAYSSEN MFG. COMPANY, SHEBOYGAN, WIS.

IT PAYS TO WRAP
THE HAYSSEN WAY



Hayssen
ELECTRIC EYE
WRAPPING MACHINES



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MULTIPRESS

FOR

Folding Cartons
Paper Products
Booklets
Labels

IMPRINTS
Batch Numbers
Blockouts
Flavors
Colors
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for controlled, dependable
ELECTRIC HEATING
IN TANKS and VESSELS

Three heat built-in control switch
High-heat, moisture-resistant seal
Curved to fit round vessels and other shapes
Lowest possible watts density per inch length

WATLOW IMMERSION UNITS

Cylindrical shapes permit low watt density heat dissipation. Seamless round sheaths minimize scaling and provide for easy cleaning. Nickel alloy sheaths for corrosion resistance: ¾" —2" dia., 3½"—60" lengths, 10W–35W densities.

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SPECIALISTS IN ELECTRIC HEATING UNITS

WATLOW
ELECTRIC MANUFACTURING COMPANY
1340 N. 23d St. St. Louis 6, Mo.

not just "know-how" but "*new how*"!

an *EXTRA* that comes with ALVEYORS *

packaging

the word for every conveyor need . . .

There's always a lot of activity behind the doors of Alvey's Development Department . . . where they're thinking up new ideas in construction features . . . new devices to simplify the problems of plant transport . . . new applications in layout that lead to economies of operation, more efficient movement of load. From the Alvey Development Department have come a parade of Alvey "Firsts". . . the Alveymatic (automatic traffic control) . . . flexible curves . . . live roller curves . . . telescopic sections . . . the new "500" chain. Alvey "new-how" means results are *sure* . . . with Alveyors!

*TRADEMARK

ALVEY ST. LOUIS Conveyors

ALVEY CONVEYOR MANUFACTURING CO., 3305 SOUTH BROADWAY, ST. LOUIS 18, MO

For Your Information
(Continued)

off by hand. The first (PB-87,648; photostat copy $3; microfilm copy $1.50) and second (PB-87,467; photostat $4; microfilm $1.75) reports deal with progress of research from January through June, 1944, and from July, 1944, through June, 1945, respectively. The third (PB-87,649; photostat $2; microfilm $1.25) describes a series of 10 exposure tests. Orders for the reports sent to the above address should be accompanied by check or money order payable to the Treasurer of the United States.

Benjamin Wood was appointed director of marketing for the **Glass Container Mfrs. Institute,** New York, during the organization's recent semi-annual meeting at White Sulphur Springs, W. Va. For the past 10 years, Mr. Wood has been managing director of Tea Bureau, Inc.

B. Wood

Two new marketing groups retained by the Institute were announced at the same time: Foote, Cone & Belding was named as the advertising agency and the Elmo Roper organization as research counsel.

Copies of an up-to-date list of all national standards approved by the **American Standards Assn.** are now available by writing the association at 70 E. 45th St., New York.

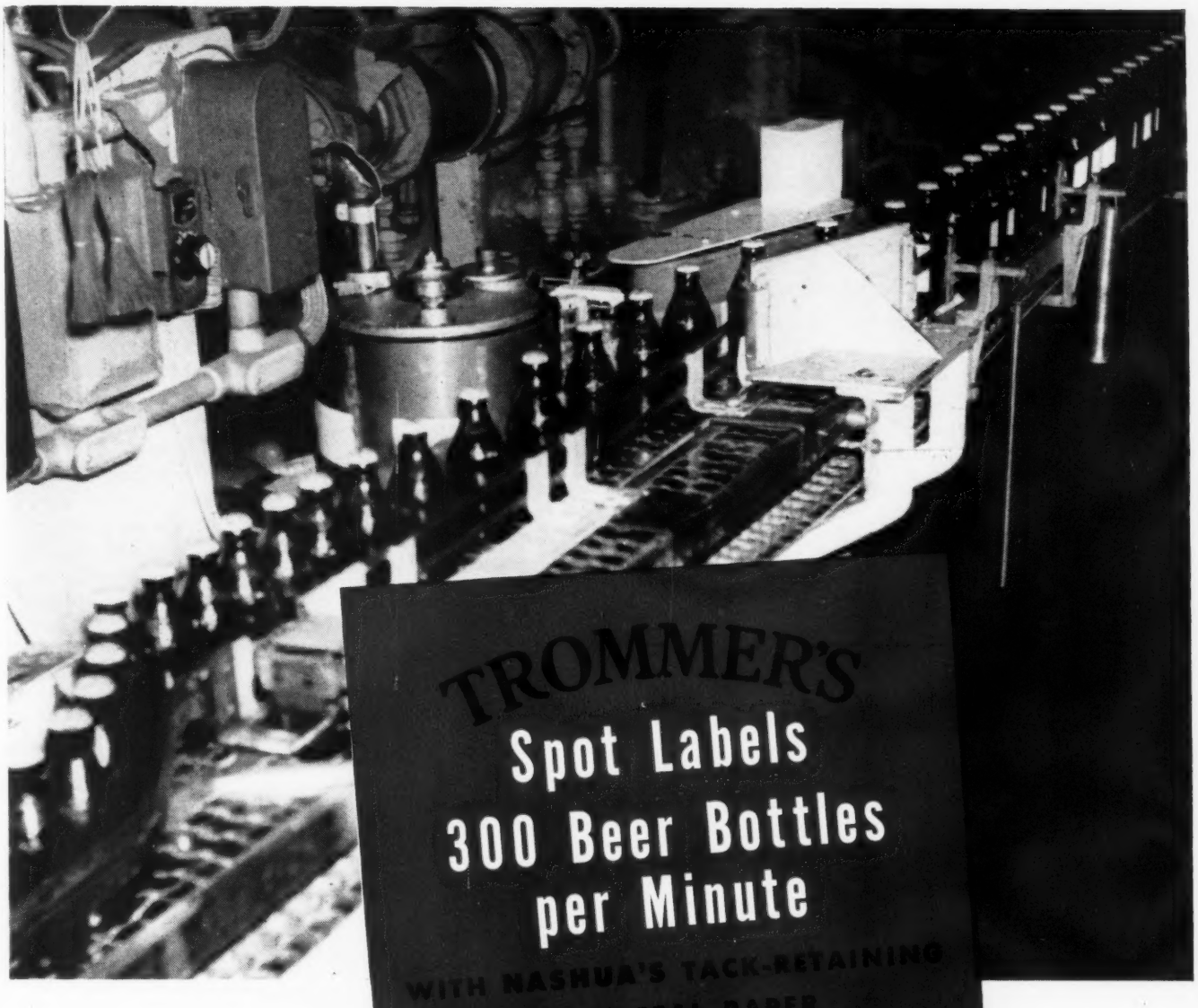
The American Society for Testing Materials which holds its 51st annual meeting at Detroit, Mich., the week of June 21 is planning 18 technical sessions, over 300 committee meetings and testing-apparatus and photographic exhibits. Registration headquarters are at the Book-Cadillac Hotel. Dr. P. C. Aebersold, chief of the Isotopes Division, Atomic Energy Commission, will discuss "Isotopes and Their Application in the Field of Industrial Materials," for the Marburg lecture on June 24.

Central States Paper & Bag Co., Inc., St. Louis, Mo., has brought out a new sales promotion pamphlet using as the theme a pictorial tour of its paper, box and bag plants.

Charles W. Williams & Co., Inc., have issued two catalogs complete with price lists for silver printed box covering papers and Satintone paper, embossed and plain. Copies may be secured by writing the company at 303 Lafayette St., New York.

Packagers of branded merchandise will find **"The New Trade Mark Manual"** by Daphne Robert a compendium of useful information on a subject that has never been too well understood by the average business man and which has not been clarified by the new Lanham Act. The book is well organized, written in simple language, and the cases and examples cited for illustrating points in the text are drawn from well known brand names and trademarks. The manual is published by The Bureau of National Affairs, 1231 24th St., N. W., Washington, D. C., and costs $6.50.

"Resins for the Paper Converter" (Tappi Monograph Series, No. 5, **Technical Assn. of the Pulp & Paper Industry,** 122 E. 42nd St., New York; price, $5), was prepared by members of the Tappi Coating Committee as one of a series of monographs on various technical phases of paper



In the John F. Trommer Brewing Co., East Orange, N. J. plant a revolutionary method of high speed, precision labeling has proved successful. This brewery has built a single bottling line around the New Jersey Machine Corporation's fully automatic, non-stop rotary Label-Dri Machine, Model 160, and are dry labeling 300 bottles per minute with Nashua's Thermo-Kote*, heat seal paper.

Nashua's Thermo-Kote* was adopted because this heat seal paper means:

- Precise Registration
- No Curl
- No Adhesive Smears
- Instant Tack
- Positive Adhesion
- Water-Immersion Resistance
- High Uniform Quality
- Shipment and Storage Stability
- Elimination of Glue
- No Down Time for Adhesive Clean Up

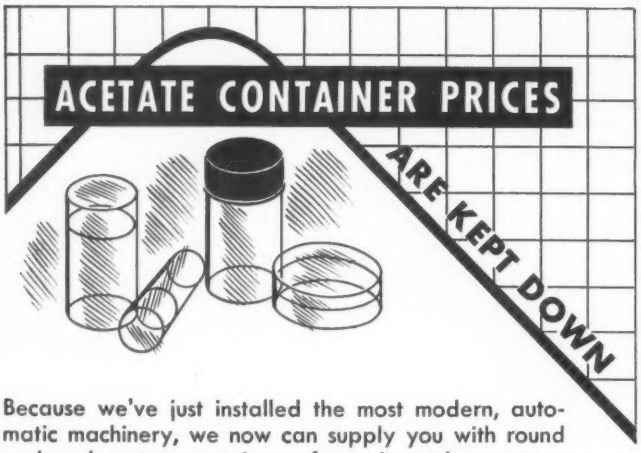
These advantages combined with the high speed labor-saving economies of the New Jersey Machine Model 160 are cutting production costs at Trommer's Brewery.

Ask Nashua's Sales Research Department for information on dry labeling. If you need a heat seal paper, Nashua has the best.

*Provisional trade name

NASHUA GUMMED AND COATED PAPER COMPANY
NASHUA, NEW HAMPSHIRE

NASHUA
MAKES PAPER MAKE MONEY FOR YOU



Because we've just installed the most modern, automatic machinery, we now can supply you with round and oval acetate containers of any size at low cost . . . and in quantities to permit volume sales.

Despite the low cost of these containers, you don't sacrifice one bit of quality. Made of heavy acetate sheeting, these containers have snug fitting lids and bottoms that won't push through.

Send us your requirements today. We'll quote and let you be the judge.

Everett
TRANSPARENT CONTAINER CORP.

OR 3-4740
251 Third Avenue, New York 10, N. Y.

★★★★★★★★★★★★★★★★★★★★★★★★★★

Announcement

OSCAR TRILSCH COMPANY

announces the removal of its New York office and showroom to new enlarged quarters at

366 FIFTH AVENUE
NEW YORK CITY 1
New telephone LOngacre 4-3328

★
We invite you to visit us and see our complete line of JEWELRY AND PERFUMERY BOXES

Factory:
150-25 18th AVENUE • WHITESTONE, N. Y. • FLushing 9-2365

★★★★★★★★★★★★★★★★★★★★★★★★★★

For Your Information
(Continued)

making, treating and use. The authors are George C. Borden, Jr., director of research at Riegel Paper Co., and Samuel S. Gutkin, of Falk & Co.

The new fact-sheet file published by **Kimberly-Clark Corp.** contains 12 data sheets on the application of Kimpak creped wadding for surface protection and padding of furniture for shipment by rail. The recent issuance of the new Supplement 45 to Consolidated Freight Classification 17 makes this information timely. Copies of the file may be obtained by writing to the Kimberly-Clark Corp. at Neenah, Wis., or from its nearest distributor.

At the recent annual meeting of **The Society of The Plastics Industry,** the following officers were re-elected to serve until June, 1949: **Neil O. Broderson** of the **Rochester Button Co.,** chairman of the board; **George H. Clark** of **Formica Insulation Co.,** president; **Gordon Brown of Bakelite Corp.,** vice president; **Norman Anderson** of **General Molded Products Corp.,** secretary. **J. J. B. Fulenwider** of **Hercules Powder Co.** is the newly elected treasurer.

Directors elected to serve for the next year in addition to the officers are: **Irving D. Wintrob** of **M. Wintrob & Sons, Ltd.; Ralph David** of *Pacific Plastics Magazine;* **Horace Gooch** of **Worcester Molded Plastics Co.; C. N. Sprankle** of **Sandee Mfg. Co.; Monroe L. Dinell** of **Clover Box & Mfg. Co.; F. W. McIntyre, Sr.,** of **Reed-Prentice Corp.; Frank J. Groten** of **Firestone Plastics Co.; N. J. Rakas** of **National Automotive Fibres, Inc.; Nelson E. Gage** of **American Insulator Corp.; J. L. Howie, Jr.,** of **The Grigoleit Co.; J. E. Gould** of **Detroit Macoid Co.** and **D. S. McKenzie** of **General Electric Co.**

During the meeting, discussions were held on the forthcoming **Third National Plastics Exposition** to be held in Grand Central Palace, New York, the week of Sept. 27.

Arthur C. Babson and Charles P. Taft were among the speakers at the 13th annual convention of the **National Paper Box Mfrs. Assn.** held in Cincinnati last month. Industry representatives addressing the first session of the convention included **James R. Turnbull** of **Monsanto Chemical Co., Donald L. Hartman** of **Mobile Paper Mill Co.** and **Chester A. Gage** of **National Starch Products, Inc. E. V. Brown,** president of the **Canadian Paper Box Mfrs. Assn.,** reported on activities in Canada.

The second session included addresses by **Edwin S. Dillard** of the **Old Dominion Box Co., W. Clement Moore,** tax consultant for NPBMA, **Richard E. Paige,** packaging engineer, **Ralph L. Harden,** chairman of the public relations committee, **Charles H. Nitsch** of **Stokes & Smith Co.** and **James R. Carter** of **Nashua Gummed & Coated Paper Co.**

One of America's Leading

FLOCK PROCESSORS

of Rayon & Cotton Papers and Textiles

FLOCK
EMBOSSING CORPORATION

— Now... New Brilliance and Color in

COTTON VELOUR PAPERS

Available in

27" BOXWEIGHT — 54" BOXWEIGHT
17 COLORS — PROMPT DELIVERY FROM ADEQUATE STOCK

... Competitively Priced!

MERCHANTS! CHOICE FRANCHISES STILL OPEN!
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WRITE FOR DETAILS

Sold thru Distributors and Paper Merchants from Coast to Coast

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Send for Sample Booklet and name of supplier nearest to you

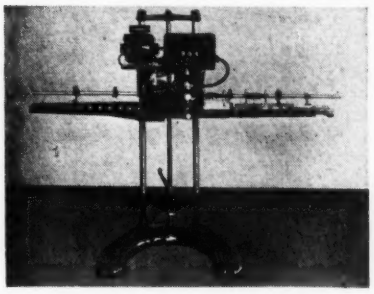
FLOCK
EMBOSSING CORPORATION
598 BROADWAY, NEW YORK 12, N. Y.

Amsco

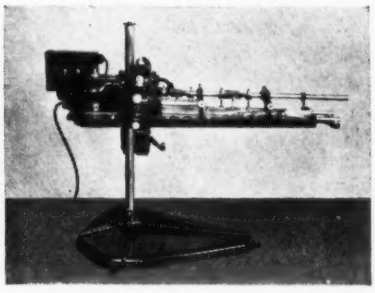
ALL THE FEATURES YOU WANT FOR BETTER BAG SEALING

3 MODELS (OF MANY) TO FIT YOUR EXACT REQUIREMENTS

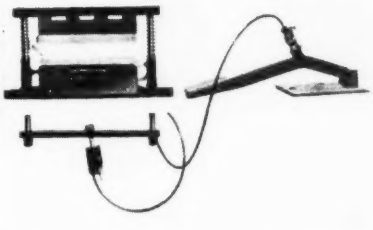
1 AMSCO HI-SPEED AUTOMATIC ROTARY BAG SEALER MODEL DC



2 AMSCO HI-SPEED AUTOMATIC ROTARY BAG SEALER MODEL S



3 AMSCO FOOT OPERATED BAG SEALER MODEL SS-7



FREE

Write today for illustrated brochure

You find every packaging feature that "pays off" for you in increased production at lowest cost in Amsco bag sealing machines. Maintain a fast, steady flow of sealing bags with no handling — bags *automatically* carried through folding, and sealing operations.

No other machines offer so much for so little!

Represented by: Miller Wrapping & Sealing Machine Co., Chicago, Ill. (South & Midwest) • Simplex Wrapping Machine Co., Oakland, Calif. (Far West)

AMSCO PACKAGING MACHINERY

Amsco Packaging Machinery, inc.
31-31 48th AVE. • LONG ISLAND CITY 1, N. Y.

Here's one place where a dollar BUYS MORE TODAY than in 1939!

When you pay almost double the 1939 price for a ton of coal, you're still only getting 2,000 pounds of coal. No matter how you burn it, you won't average more than 12,500 b.t.u.'s per pound—same as in 1939. And that goes for almost everything else that has gone up in price—you're paying more today, but you get no compensating increase in value.

Compare the cost of your advertising in MODERN PACKAGING on the same basis, and what do you find?

Even with an increase in rates, your advertising dollar, in MODERN PACKAGING, actually buys more today—not less—than in 1939. Today you receive over 50% more circulation—12,352 for only $250 per page as compared with a circulation of 9,078 for $170 per page in 1939. (Net paid ABC 12-time rate.)

In the packaging field, the actual unit sale of machinery, equipment and supplies, the purchasing power, the dollar volume—are all much greater than in 1939. That means that your advertising in MODERN PACKAGING is not only covering a broader area, but a much more fertile one.

The production of raw materials for packaging has increased from 49,518,254,000 pounds prewar to an estimated 83,517,750,000 in 1948—almost double. So the packaging market today is almost twice as fertile as it was in 1939.

Never before in the history of MODERN PACKAGING have we offered greater value for the advertising dollar than we do today. But the biggest gain belongs to the advertiser who understands how to use the advertising pages of MODERN PACKAGING and the simple arithmetic of reaching 12,352 readers every month for only $20.24 per thousand. And if you consider an average of approximately three additional pass-on readers per copy, your actual circulation cost is less than $7.00 per thousand.

Modern packaging

A BRESKIN PUBLICATION

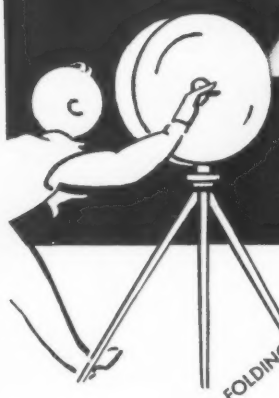
122 East 42nd Street, New York 17, N. Y.

CHECK LIST
for
PACKAGE PLANNING
1. Product Characteristics
a. Physical form
b. Protection required
2. Selected Packaging Material
a. Strength, productivity, familiarity
b. Physical characteristics
c. Availability and cost
3. Production Considerations
a. Use present equipment and personnel
b. Design — present or new indicated
4. Convenience Factors
a. Storing, shipping ease prior to use
b. Packing and shipping considerations
c. Distribution and consumer considerations
5. Merchandising Considerations
a. Product analysis
b. Market analysis
c. Retailing analysis
d. Competitive analysis
6. Package Appearance
a. Brand identification
b. Information
c. Sales appeal
The versatility custom-built into a set-up box is your assurance of getting more essentials of your planned package with greater packaging economy
Emperor
Standard
PERSONNA
NATIONAL PAPER BOX MANUFACTURERS Association
AND COOPERATING SUPPLIERS
Liberty Trust Building • Philadelphia 7, Penn.
FOR INFORMATION OR SERVICE • CONSULT YOUR NEAREST SET-UP BOX MANUFACTURER

is your package

a star

. . . or just an "extra"?



CREATIVE FOLDING CARTONS

TRANSPARENT PACKAGING

INTRIGUING SET-UP BOXES

UNUSUAL MERCHANDISE COUNTER DISPLAYS

SPECIALIZED PACKAGING

MOULDED ACETATE DISPLAYS IN COLOR

Is your package a STAR of the Counter and Shelf? Or is it just one of the many "extras" that get scant notice in the vast shopping parade?

These days, the successful product must be an eye-appealing package . . . eloquent, arresting, persuasive.

ACME creates STARS in Packaging and Displays that have irresistible appeal. Remember:

"The Better the Product, the More Important the Package"

Acme

PAPER BOX COMPANY

DESIGNERS • CREATORS • MANUFACTURERS

STATE AT SIXTIETH ST., CHICAGO 21, ILL

Less than 200 days to Xmas—but just 40 more days to place your Xmas printing order for Cameo quality seals, tags, wraps and labels.

'Twas the day before Xmas
and all through the town

Shoppers were scurrying seeking
gifts of renown,

And of all the fine Xmas
pretties there on display

The finest packages were decked
in Cameo designed array.

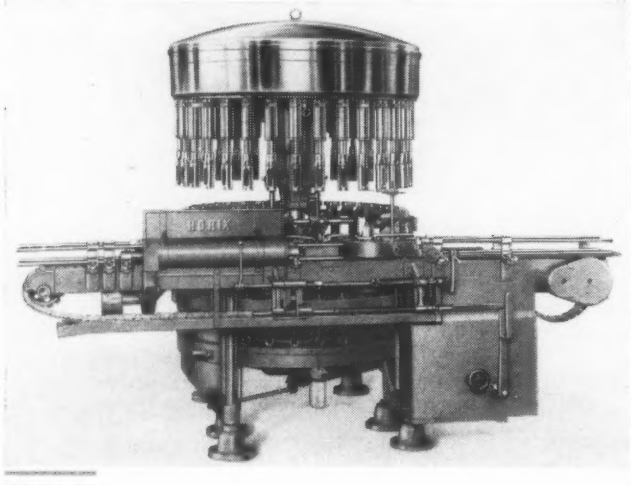
Enhance Your Xmas Items

with quality seals, tags, wraps and labels by CAMEO! For over twenty-four years CAMEO has meant distinctive packagings — for all seasons throughout the year. Christmas is closer than you think! Have you placed your order? Call CAMEO *now!*

CAMEO
DIE AND LABEL COMPANY
154 WEST 14TH STREET • NEW YORK 11, NEW YORK
CANADA: CAMEO CRAFTS, INC., 157 ST. PAUL ST., W. MONTREAL 1, QUEBEC

Write for details — samples today!

for LOWEST COST per fill ... use the FASTEST FILLER built!



THE Horiz Model HAV-32 Fully-Automatic Rotary Filler handles an almost unlimited variety of still liquids, either light or semi-fluid, filling into ounces, pints, quarts or gallons of standard or special shape. Regardless of container shape or type of liquid, your cost per fill is minimized by trouble-free operation, at whatever speeds meet your specifications.

Like all Horix Fully-Automatic Fillers, the HAV-32 is easily cleaned—frequently only a pressure hose is necessary—and requires no skilled labor for operation. Simple, sturdy construction minimizes maintenance, permits rapid changeover without use of any special tools. And, Horix mechanical safety devices are always ready to act instantly to prevent waste of product, glass breakage, or damage to machine.

Write today for full information on the Horix HAV-32, *the fastest still liquid filler built!*—there's no obligation. Horix Manufacturing Company, Dept D, Pittsburgh 4, Penna.

HORIX MANUFACTURING CO.
PITTSBURGH 4, PENNA.
CONVEYORS and FILLERS

U.S. Patents Digest

Edited by H. A. Levey

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

Tubular Package-Forming and Filling Method and Apparatus, J. J. Barnett (to Chase Candy Co., Chicago, Ill.). U. S. 2,438,198, Mar. 23. A method for forming and filling a tubular package comprising engaging a sheet of flexible material with a rotating mandrel having suction ports thereon, causing the mandrel to grip the sheet by suction exerted through the ports and wrapping sheet about mandrel to form tubular structure.

Infant's Formula Can and Can Opener and Nipple Attachment, W. Relis, Lomita, Calif. U. S. 2,438,299, Mar. 23. In combination, a can containing a liquid, which can is formed with a threaded spout closed by an end wall, a can opener and nipple attachment formed with a threaded cap, a blade and a nipple, which cap is screwed on threaded spout to cause blade to cut an opening spout end wall, through which opening the liquid may flow from spout into nipple.

Flexible Cigarette Case with Reinforcing Means, J. A. Mace, Tampa, Fla. U. S. 2,438,408, Mar. 23. A flexible cigarette case with a pocket and a removable protective attachment with rigid plate and diagonal flanges extending upwardly from three edges, with the other edge flat so it may be slid into the pocket of case and equipped with a distending device which engages flange of plate which frictionally binds cigarettes in pocket.

Canister, P. V. DiCosmo and M. C. Ricciardi (to The Canister Co., Phillipsburg, N. J.). U. S. 2,438,430, Mar. 23. The method of closing the end of a cylindrical container body formed of short-fibred material having the properties of chipboard which comprises the steps of softening the end of the body, assembling a disk of stiff material having a diameter substantially equal to the internal diameter of the body with a sealing diaphragm of greater diameter than container body and inserting the resulting assembly into the softened end of the container body with the sealing diaphragm facing inwardly.

Collapsible Container, T. Friedman, New York, N. Y. U. S. 2,438,434, Mar. 23. A collapsible container comprising a plurality of connected substantially ring-shaped members varying in size whereby one member may be contained in another member when the container is collapsed, the innermost member being provided with a closed end having a flange extension, a collapsible handle for container and cooperative means on one member for securing handle to container.

Tube forming apparatus, S. R. Geist, Sr., and N. R. Davis (to Gemloid Corp., Elmhurst, Long Island, N. Y.). U. S. 2,438,498, Mar. 30. Means for heat sealing plastic material comprising a pressure element, an electrode mounted on pressure element, means for applying high frequency current to electrode and means for applying pressure to pressure element, this in combination with a rack which is shaped to receive plastic material wrapped thereabout with portions extending beyond the wrapped plastic material, means for holding plastic material in wrapped position and positioning it under pressure element.

Vending Machine, M. L. Holt, Lookout Mountain, Ga. (one half to J. B. Brock, Adairsville, Ga.). U. S. 2,438,502, Mar. 30. A vending machine for bottled merchandise, having in combination means for guiding and maintaining the alignment of two stacks of bottles by engagement on three sides of bottles, spacing means located between the bottles of adjacent stacks, bottles in the two stacks being offset vertically from each other, said machine being coin operated.

Manufacture of Paperboard Boxes, H. P. McGovern (to Dennison Mfg. Co., Framingham, Mass.). U. S. 2,438,509, Mar. 30. Method of making paperboard boxes of the type with bottom, front, back and two sides fastened together at all four corners and equipped with a cover with front and sides fastened at the corners and having a sheet of material covering the outer surfaces of box and cover.

Apparatus with Rotatable Head and Belt for Supporting Containers and with Means for Closing Containers, K.

Sparkling eye appeal that creates point-of-purchase preference

• A distinctive Kimble container gives your product the deciding vote in many a buying decision . . . is a valuable asset at the vital moment the purchase is made.

In Kimble containers you get craftsmanship unexcelled anywhere in the world. You benefit from the dozens of Kimble-perfected techniques and operations which contribute so largely to flawless finish and maximum practicality.

Many of today's famous brands in perfumes and toiletries owe much of their success to the wide-range appeal of their individualized Kimble glass containers. Let us co-operate with your designers.

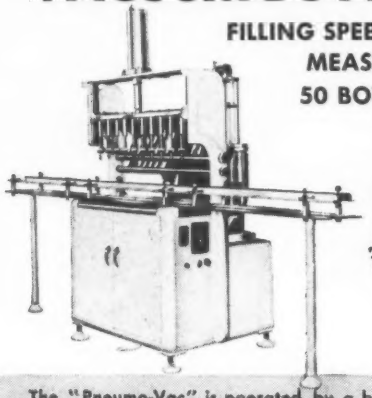
SPECIFY KIMBLE FOR ASSURANCE OF CONTAINER QUALITY

KIMBLE GLASS TOLEDO 1, OHIO

Division of Owens-Illinois Glass Company

THE ERTEL "Pneumo-Vac" VACUUM BOTTLE FILLER

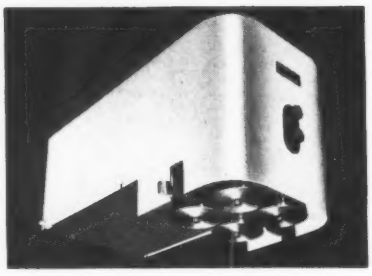
FILLING SPEED
MEASURED IN QUARTS—
50 BOTTLES PER MINUTE



The "Pneumo-Vac" is operated by a balanced foot valve which allows the operator full use of both hands and reduces physical effort to a minimum. Drippage is positively prevented while unit is in operation. Liquid filling heights, for 3" to 13" bottles, can be quickly regulated. Illustrated "Pneumo-Vac" bulletin gives full information. Write for your copy.

ERTEL ENGINEERING
CORPORATION
KINGSTON NEW YORK
NEW YORK CITY SALES OFFICE AND SHOWROOM
40 WEST 48th STREET, NEW YORK 19, N. Y.

HILLS HEAVY DUTY DUAL ROTARY HEAT SEALER



View from below, showing dual sealing rollers.

For Laminated Foil Bags

This ruggedly constructed machine heat-seals filled bags made of laminated foil and kraft paper. It's outstanding features include:

1. FULL FLOATING PRESSURE ROLLS with positive gear drive. They compensate automatically for variations in bag thickness.
2. VARIABLE SPEED CONTROL. Sealing speed can be synchronized exactly with travel rate of conveyor belt over which HILLS SEALER is mounted.
3. ADJUSTABLE SEALING PRESSURE. Two hand knobs permit independent pressure regulation of each of two sets of sealing rolls (see picture).
4. LOW MAINTENANCE COST. Users report sustained operation with a minimum of upkeep.

WRITE FOR FREE DESCRIPTIVE BULLETIN

Also available with single set of rolls for sealing cellophane and pliofilm.

A. C. HILLS & CO.
790 Broad Street • Newark 2, New Jersey

U.S. Patents Digest
(Continued)

Stengelein, Saginaw, Mich. U. S. 2,438,624, Mar. 30. In a packaging machine, a circular head rotatable about its vertical axis with means for rotating the head, means for delivering envelopes with their flaps in open position to periphery of head and having means on a continuous belt for clamping envelopes in succession to head, means for moistening flap, means for closing flaps, means for pressing flaps closed to seal same and means for releasing envelopes from head after having been sealed.

Toothbrush Having Paste Tube on Handle, A. Loehr, Wichita, Kans. U. S. 2,438,641, Mar. 30. A toothbrush with a stub handle leading from brush with tooth paste position on handle, a removable cap on tube cap being notched and a wire fork fixed into end of handle and bent over tube to retain tube on handle.

Paper-Box-Forming Apparatus, F. D. Palmer (to F. D. Palmer, Inc., Chicago, Ill.). U. S. 2,438,788, Mar. 30. In a paper-box-forming machine, means for successively delivering box blanks to a predetermined box position, a double-ended plunger, means for reciprocating plunger to cause its opposite ends successively to traverse box-blank position and having a pair of box-forming devices respectively disposed on opposite sides of box-blank position.

Paper-Bag-Making Machine, J. Nicholas (to E. S. & A. Robinson, Ltd., Bristol, England). U. S. 2,438,787, Mar. 30. In a paper-bag-making machine, a rotatable roller supporting a paper web for traveling movement, an externally threaded shaft mounted for rotation in parallel relation to roller and disposed laterally of the direction of travel of the paper web and a seam adhesive device supported on sleeve and movable therewith laterally of the paper web, adhesive device having an adhesive-applying rotary disk in contact with paper web.

Container and Closure Therefor, A. J. Williams and W. J. Dyson (one third to The Wallis Tin Stamping Co., Ltd., Poole England). U. S. 2,438,689, Mar. 30. The combination of a container having an external flange around its mouth, which flange is circumferentially grooved between its lower edge and the top of the container, which groove is interrupted to provide a single abutment, a two-part closure comprising an inner-flanged metal cap to close the mouth of the container and reach down around the outside thereof, the flange clipping into the groove of the container flange.

Carton for Vacuum-Bottle Fillers, E. B. Whitehead (to Atlantic Carton Corp., Norwich, Conn.). U. S. 2,438,879, Mar. 30. A receptacle for thermos-bottle filler having a nipple on its lower end comprising, opposite and adjacent longitudinally extending vertical side walls forming a tube-like receptacle, closure means at the upper ends of walls and lower closure flap hinged to the lower end of one of side walls for overlying the lower end of the receptacle and equipped with a platform for supporting a thermos-bottle filler.

Packaging Method, H. F. Waters, New York, N. Y. U. S. 2,438,981, April 6. The method of producing fluid-tight containers which comprises providing a collapsed envelope fluid-tight and fusible on at least the inner surface and including the same number of layers throughout, erecting envelope on a mandrel and combining erected envelope with a carton.

Container, M. I. Williamson (to National Folding Box Co., Inc., a corporation of Connecticut). U. S. 2,438,982, April 6. An improved paperboard container comprising an outer shell and an inner shell, the outer consisting of a body and cover member, both being telescopically slidable over the inner shell into edge-to-edge abutment with each other to enclose inner shell.

Can Transfer and Orienting Mechanism, A. L. Christiansen, Willowbrook, Calif. U. S. 2,439,075, April 6. A pair of horizontal conveyors, the first having means for holding cans transversely with respect to the longitudinal extent of the latter conveyor and for conveying same and means for transferring cans from the latter conveyor to a substantially upright position on the other conveyor; a third conveyor is positioned at the bottom of the receiving end of a helical passage means, one end of the third conveyor being positioned below the discharge end of the first conveyor for receiving cans in horizontal position.

Dispensing Toothbrush, W. J. Hoffman and O. P. Olson, Chicago, Ill. U. S. 2,439,166, April 6. A dispensing brush comprising a hollow container for material to be dispensed having a discharge spout projecting longitudinally of container and opening in that direction, spout communicating with container interior, means to discharge material in container through the

WRAPPER ACHIEVEMENT OF THE MONTH

This month, Kidder's top honors go to a neat, sentimental little job, "April Showers". Favorite among the girls for wrapping shower gifts, it is available in attractive shades of muted rose and blue or steel gray and Chinese red.

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KIDDER POINTERS

No. 18.

Observations of trends and indications in packaging... noted by the manufacturers of Kidder "3 Point" Presses, Kidder Press Company, Inc., Dover, N. H.

A new package: "Thermaking", an all-purpose paperboard container is said to be temperature-proof, non-absorbent and leak-proof by reason of a new interior coating process and a fused bottom.

Poor packaging can lose foreign markets for American shippers. Light, flimsy, or poorly designed packages result in excessive damage in shipping while over-protection adds weight which frequently raises duty taxes to the point where profits are lost. Appears to be a nice problem.

Increased production, steady markets and a general balancing of supply and demand make the outlook good for pulp and paper industries for the rest of 1948 according to the Department of Commerce.

Two new products of interest to the packaging industry are now available in limited quantities. First is polyamide resin—second cousin to nylon—a tough, heat-resistant plastic used primarily as a water- vapor-proof sealer and adhesive surface coating for paper. Having properties not found in any other single material, it has application in such products as lacquers and printing inks. Second is allyl starch—with potential uses as a synthetic coating, a thermosetting adhesive and as a base for printing inks. Complete story in March 1948 issue of Packaging Parade.

A revolutionary cigarette package made of a single piece of aluminum . . . inside and out . . . the first basic change in 40 years in the industry . . . has been announced by a popular brand. Trademark, etc., is printed directly on the aluminum foil. Results: greater eye appeal . . . increased production.

Monsanto Chemical Co. announces Albi-R— a remarkable fire-resistant paint which protects flammable materials. Developed at Harvard, the new paint develops a hard, impervious skin of matlike quality which transmits little heat and prevents spread of flames.

A frozen food locker carton that eliminates leaks by means of a plastic inner bag which can be re-used, which is airtight and has low bacteria count, is now on the market. Inner bag will not crack at - 50F and closes with a rubber band.

Plastics, wood, metal, rubber, leather, glass and labels can be easily adhered to themselves or to each other by "Rez-N-Glue"—a new, powerful vinyl base cement. It dries fast but not too fast for handling large pieces. It is cold setting, requires only a one surface application, has good "wet grab" and remains permanently flexible. Can be applied by brush, roller or spray. Resists water, oil, gasoline, vermin and mold.

A new vinyl plastic pressure-sensitive tape has been marketed as a waterproof seal for bottles and cartons. Name, "Scotch" Plastic Film tape.

J. R. Hoover, president of Plastic Materials Manufacturer's Association, predicts that plastic materials will be in much better supply in 1948 as new facilities have recently come into production.

For recognition value, color must take a back seat to shape according to J. H. Nash who made a survey of many national brands and trade marks recently. Some amazing conclusions are to be read in his article in March '48 issue of Packaging Parade.

KIDDER PRESS COMPANY, INC., ***Printing Machinery,*** **Dover, N. H.**

U.S. Patents Digest
(Continued)

spout and equipped with means to slidably support brush and handle on said container for rectilinear sliding adjustment for removal of brush relative to container.

Method of Identifying Goods and Identifying Labels Used Therewith, C. Emmey and M. Katzenstein (to Press-On, Inc., New York, N. Y.). U. S. 2,439,082, April 6. The combination with an article of manufacture to be identified, the articles having interstices, of an identifying label comprising a film of thermoplastic synthetic resin, normally non-adhesive, affixed at one surface of the label under heat and pressure.

Self-Sealing Container, L. McLaughlin (to Wingfoot Corp., Akron, Ohio). U. S. 2,439,366, April 6. A liner for self-sealing containers to hold liquid hydrocarbons comprising a layer of partially cured rubber, two plies of weftless or broken-weft fabric with the warp threads of each at cross angles to those of the other bonded together and to one side of the rubber layer, a third ply of weftless or broken-weft fabric bonded to the other side of the rubber layer with warp threads at an intermediate angle to the warp threads of the two other plies and a ply of chlorobutadiene-coated fabric bonded to this third ply.

Combined Dental-Powder Dispenser and Brush Holder, F. J. Hofman, New York, N. Y. U. S. 2,439,429, April 13. A cylindrical outer case, a closure for the lower end, the upper end of case having screw threads and a dispensing opening, a closure cap threaded on screw threads and provided with a dispensing opening which may be moved into and out of registration with the first-named dispensing opening by turning closure cap; a dentrifice-powder container disposed in outer case with dispensing opening registered with first named dispensing opening and a toothbrush head disposed between lower ends of outer case.

Moistureproof Packaging, R. R. Richardson, W. T. Ritter and R. O. Ragan (to Chicago Carton Co., Chicago, Ill.). U. S. 2,439,435, April 13. A package with moistureproof paperboard rectangular tubular side wall structure, and end closure embodying an insert element across an end of the tubular structure, end portions of one pair of relatively opposed side walls being folded inwardly over element substantially into face-to-face contact therewith and adhesively secured thereto, the other pair of side walls being folded outwardly and having portions refolded upon themselves and equipped with insert which forms channel extending continuously across end of box and a filler of water-insoluble adhesive material placed in channel.

Bag Adapted for Display by Suspension, H. F. Shumann, Pittsburgh, Pa. U. S. 2,439,584, April 13. A bag comprising a flattened tube formed of moistureproof, flexible material, walls of tube being sealed together at one end to form a closure, sealed closures being turned against tube body to form an open, crease-free loop forming a relatively narrow channel across the entire width of tube and being able to receive a support rod or wire of display rack through this channel.

Bottle Stopper, D. G. Kopecky, Taft, Calif. U. S. 2,439,628, April 13. A bottle stopper comprising a plug made of resilient material adapted to enter the neck of a bottle, outer end of plug projecting outwardly beyond neck of bottle and being formed with an annular flange overlying outer edge of the bottle neck.

Receptacle, C. O. Ball (to Owens-Illinois Glass Co., a corporation of Ohio). U. S. 2,439,768, April 13. A blank of sheet material for forming an article having a rectangular body and a closed bottom end, blank having parallel score lines defining panels which form the body and extensions divided into narrow panels a central section in the form of a truncated triangle and outer triangular sections, the latter being adapted to fold back against the truncated triangles.

Bottle Cap, J. deSwart (one half to C. Bland Jamison and one half to A. E. Wright, Los Angeles, Calif.). U. S. 2,439,854, April 20. A closure to close a container having a mouth and external locking bead below the container mouth, said closure comprising a cap having a top, a depending integral serrated skirt, a ring and frangible connecting means between the skirt and ring normally to retain the ring integrally connected to the skirt intermediate the ends of the latter, the skirt gradually thickening in cross-section from connecting means to its bottom end.

Article-Traying Machine, C. A. Brown and F. B. VanSickle (to General Electric Co., a corporation of New York). U. S. 2,439,883, April 20. A machine for feeding articles such as lamp bulks comprising means for guiding a row of the bulbs along a course of movement in a suspended neck-down position and placement means for directing movement of individual bulbs

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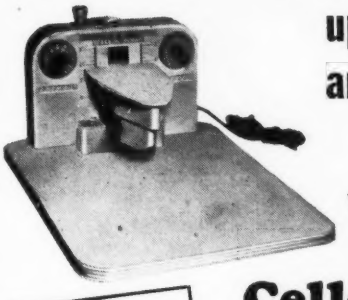

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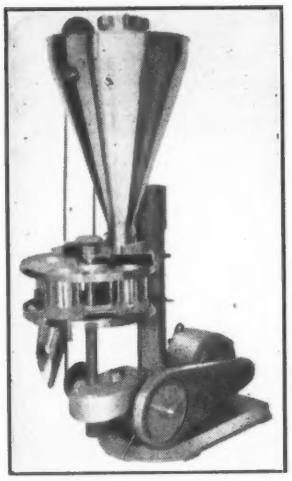

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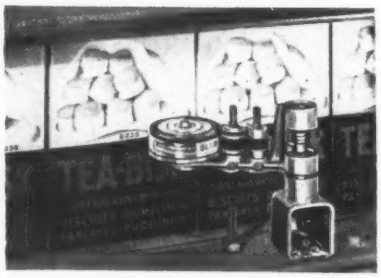

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U.S. Patents Digest
(Continued)

along the guiding means comprising a rotatable wheel having a plurality of radially extending fingers pivotally mounted thereon and means for turning wheel to cause the fingers to be carried between succeeding bulbs to control movement and position.

Paperboard Chest, W. G. Anderson, Jr. (to American Box Board Co., Grand Rapids, Mich.). U. S. 2,439,959, April 20. A receptacle having a vertical side of two thicknesses of material integrally connected at their upper edges in a smooth, continuous extension from one of said thicknesses of material to the other at the edge, upper edge having spaced slots through the material, a cover having a side of two thicknesses integrally connected at the lower edge of a side of the cover and flat hinges of flexible material slotted inwardly for a distance of each end.

Tablet-Packaging Machine, F. J. Kendle, Monterey Park, Calif. U. S. 2,439,977, April 20. A tablet-packaging apparatus comprising a hopper for supplying predetermined loads of tablets juxtaposed in rows, means for feeding an initially flat carton blank in a receiving position in which an edge underlies a load of tablets, means for advancing load to the central portion of carton blank and folding margins of blank over tablets.

Package, L. L. Salfisberg (to The Ivers-Lee Co., Newark, N. J.). U. S. 2,440,022, April 20. A container of three-dimensional articles comprising opposed layers of flexible material having inherent resiliency of low degree sealed together in zones that form relatively stiff flanges, each of which forms a boundary of a compartment for said articles.

Magnetic Cap Guide, D. W. Thomas (to Boyle-Midway, Inc., Jersey City, N. J.). U. S. 2,440,030, April 20. In a container-capping machine, cap-tightening means for moving containers and caps into operative relation with the cap-tightening means and a magnetic cap guide disposed in spaced parallel relation with the conveyor means ahead of the cap-tightening means.

Machine for Applying Closures and Sealing Jars, G. Glocker (to Super-Seal Container Corp., Washington, D. C.). U. S. 2,440,085, April 20. In a closure-applying machining wherein a jar is transported to a closure-applying station and moved axially into engagement with a closure, reciprocating transporting means for laterally sliding a closure from a position of storage to closure-applying station.

Sanitary Bottle Spigot, S. Nellson, New York, N. Y. U. S. 2,440,112, April 20. A spigot for a container for liquids comprising a gasket for engaging the top of a container, a plate disposed on top of gasket and having a depressed cup extending into gasket, said cup having a port and an orifice and extending from opposite sides having seat at end disposed in container.

Folding-Box Machine, W. A. Ringler (to The Gardner-Richardson Co., Middletown, Onio). U. S. 2,440,120, April 20. A machine for the automatic closing of open cartons consisting of a carton body with bottom panel, side walls, a front and a back wall connected to bottom panel, a carton cover hinged to back wall and front and side flange panels connected to top panel, which in collapsed condition has its cover side flange panels outfolded and its cover front flange infolded with automatic locking means comprising a lock flap hinged to front wall, the machine comprising an endless conveyor having lugs adapted to engage walls and sweep along path of conveyor to engage and downfold over into carton closed position.

Closure Cap, A. B. McGinnis (to Wheeling Stamping Co., Wheeling, W. Va.). U. S. 2,440,149, April 20. A cap having an integral end wall and a skirt and having a pin through the end wall, a metal member inside the cap through which the pin passes, the cap having an opening therethrough of a size just sufficient to accommodate the pin, a liner in the cap and prongs on the metal member for holding the liner in place.

Method of Sealing and Reinforcing Cartons with Tape and the Tape as an Article of Manufacture, L. Davis and E. D. Tuukkanen (to McLaurin-Jones Co., Brookfield, Mass.). U. S. 2,440,193, April 20. Improvement in methods of sealing and reinforcing cartons and the like with a tape having a normally non-tacky coating thereon composed chiefly of a protein-type water-soluble adhesive blended with an emulsified resinous waterproofing agent, comprising the steps of making coating tacky by wetting it with an aqueous solution containing one or more chemicals adapted to convert the protein constituent of the coating in a water-insoluble form and also to de-emulsify waterproofing agent and applying the tape to the desired surface of the carton while coating is in a tacking condition and on drying becomes water-insoluble.

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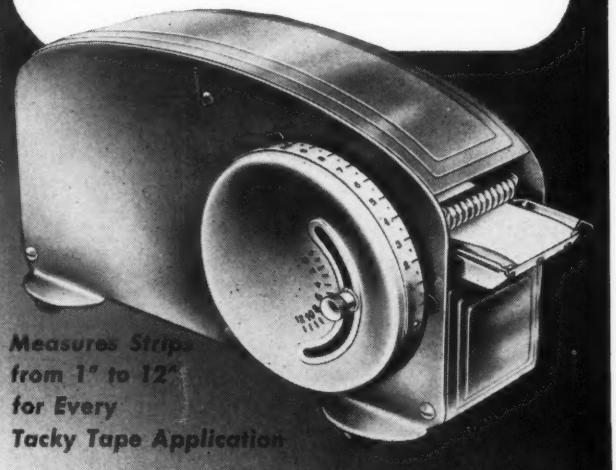

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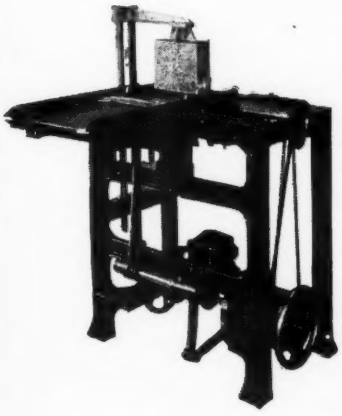
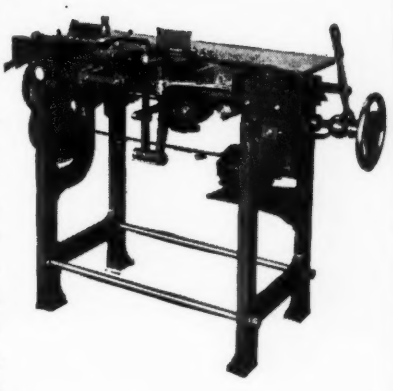


This PETERS' JUNIOR CARTON FORMING AND LINING MACHINE sets up 35–40 cartons per minute, requiring only one operator. After the cartons are set up, they drop onto a conveyor where they are carried to be filled. Machine can be made adjustable to set up several different size cartons.



This PETERS' JUNIOR CARTON FOLDING AND CLOSING MACHINE closes 35–40 cartons per minute, requiring no operator. After the cartons are filled, they enter machine on conveyor and are automatically closed. Can also be made adjustable to close several different size cartons.

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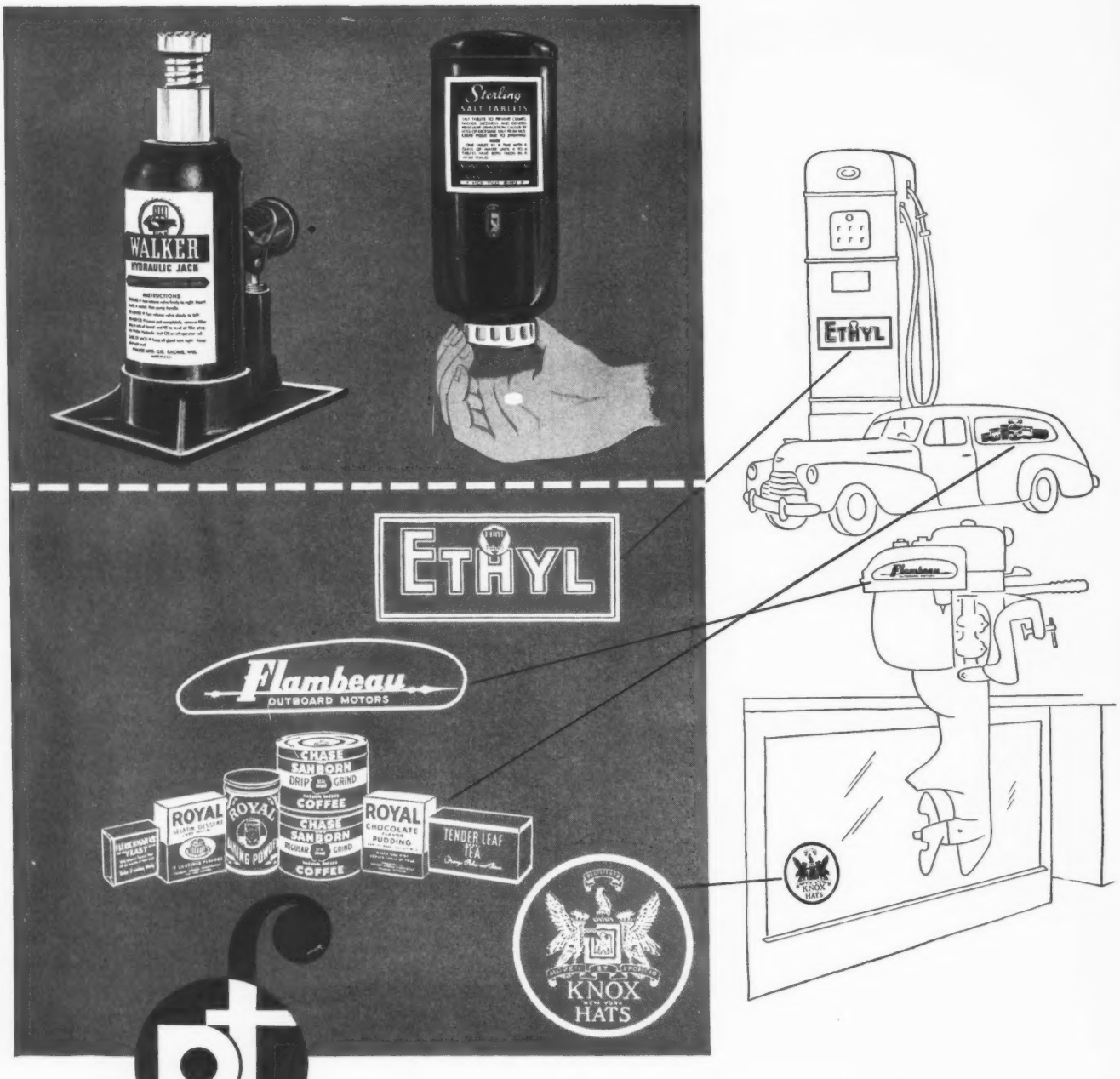

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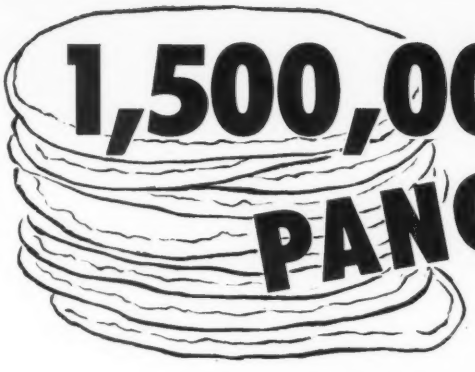

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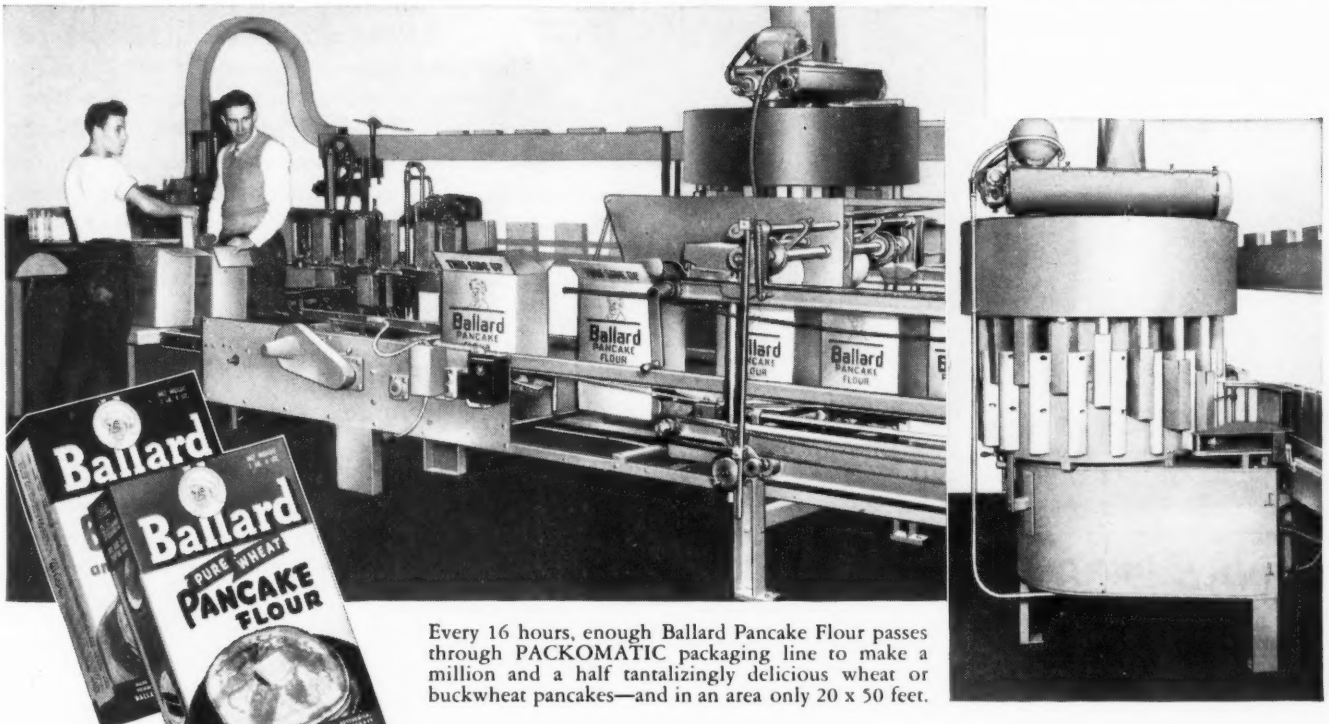

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Carton feeder automatically removes knocked-down, shell type 20 oz. cartons from carton magazine, overscores and places them on moving forms for bottom sealing; following which they are conveyed through the telescoping filler. Filled cartons are then conveyed back to the carton sealer for top sealing. Filled and sealed packages are carried automatically to Tight-Wrap labeling machines; following which they are packed into corrugated cases which are automatically glued and sealed in a PACKOMATIC Model "D" shipping case sealer.

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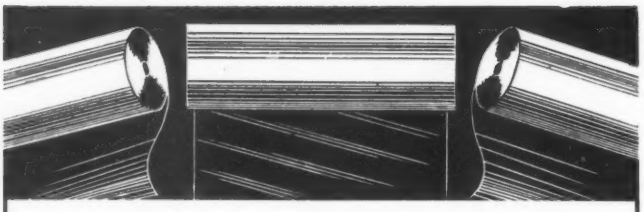

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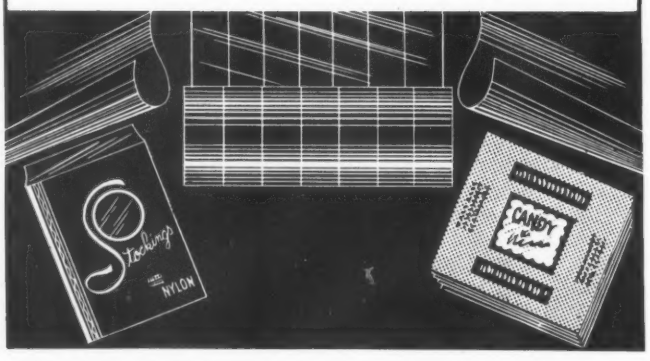

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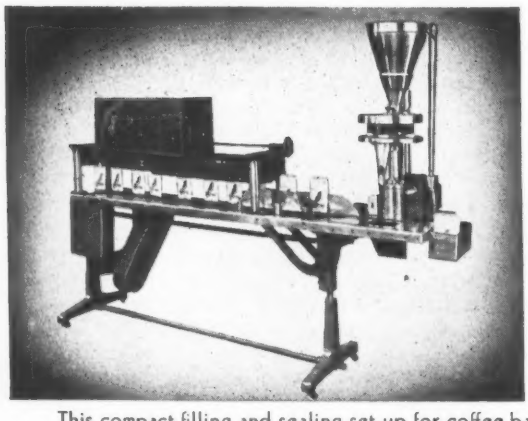

This compact filling and sealing set-up for coffee bags is low in cost, easy to operate. Speeds of 35 to 40 bags per minute with one unskilled operator.

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Films for cherries

(*Continued from page 165*) when used as liners, these films restricted weight losses in the fruit to approximately 2%. While the stems of such fruit were drier than those in sealed packages, marketability of the fruit was not impaired.

Decay: The amount of decay found in the various types of packaged cherries is given in Table IV. Rain-damaged fruit is normally very susceptible to decay and for that reason was purposely chosen for packaging purposes.

The check containers with plain paper liners showed an average of 33% of fruit rot. After 10 days at 36 deg. F. and two days at 75 deg., none of the various types of Pliofilm when used as liners reduced the amount of decay in Bing cherries; when used as sealed bags, however, they greatly lessened decay. Past studies (2) have shown that there is a high correlation between the concentration of CO_2 and the inhibition of decay. Such a correlation is not very well defined in Table IV. Decay, however, was reduced one-half to two-thirds that of the check lots, without injury to dessert quality, by packaging the fruit in sealed polyethylene and FF-75 Pliofilm.

Dessert quality: With but one exception, the dessert quality of Bing cherries was impaired during storage in sealed Pliofilm containers. As shown in Table V, only those lots packaged in the FF-75 type of film remained normal in flavor after storage at 36 deg. F. for 10 days and holding for two more days at 75 deg. The fruit developed a foul odor and a sharp, anaerobic, stale taste when packaged in sealed containers made from the thicker gauges of less pervious Pliofilms. Such films, however, could be used as liners without impairment of the dessert quality of the packaged fruit.

Lumarith, cellophane or polyethylene films, even when used as sealed bags, did not adversely affect the taste and flavor of fruit stored therein. With the exception of polyethylene, none of the latter types of films, however, caused much, if any, accumulation of carbon dioxide in the sealed packages.

Appearance of packages in storage: When warm fruit was packaged in any of the films except Lumarith or plain paper, the packages "fogged up" with condensed moisture to complete invisibility of the fruit immediately after being placed in storage at 36 deg. F. This fogging persisted with great intensity for several days. The FF-75 type of Pliofilm was considerably clearer, however, than all other types of "fogged" film.

When used as liners, all films were practically free from condensed moisture by the close of the third day of storage. Even in the most heavily fogged lots, the fruit was not wet and all condensation of free moisture appeared to be restricted to the inside surface of the film.

Some fogging persisted for six days in the sealed packages. Cellophane and polyethylene were just as clouded as the heavier gauges of Pliofilm. Water droplets were still present inside the sealed films after six

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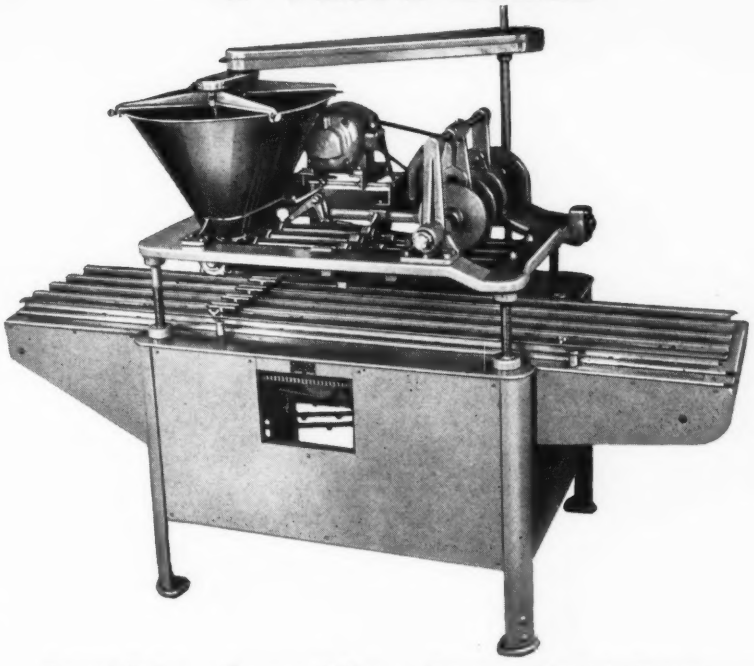

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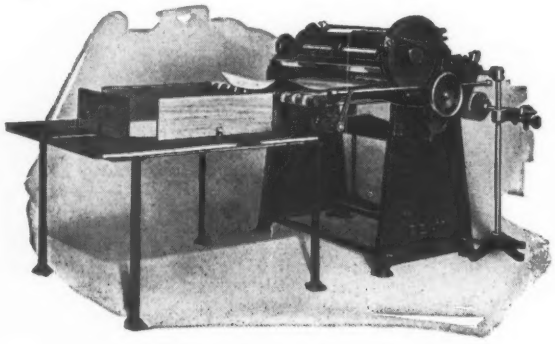

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days at 36 deg. F. The relative humidity of the storage room was held at 91%.

Upon removal of the stored packages to a warm room (75 deg. F.), none of the containers showed objectionable fogging. The appearance of the stretch-wrap packages at this time was not as good as that of the sealed bags. Reflection of light from the crinkled surface of the stretch wrap gave a poor appearance to the container. A similar condition was also observed in the cellophane bags. Visibility of the packaged fruit was best in Lumarith and poorest in polyethylene. The sealed containers of Pliofilm (both bags and stretch wraps) were as taut as inflated balloons from the pressure of the entrapped respiratory gases formed during storage.

Appearance of stems and fruit: After 10 days at 36 deg. F., the stems of the fruit were not so green or fresh looking when packaged in Pliofilm liners as when held in sealed bags of the same film. Stems of fruit held in sealed Lumarith were inferior in color and appearance to those in sealed Pliofilm, cellophane or polyethylene. The color of the fruit itself was brightest when packaged in sealed FF-75 Pliofilm. Fruit held in polyethylene bags was also of very good appearance; that held in Lumarith or improperly sealed cellophane was about like that in plain paper-lined containers.

After holding an additional two days at 75 deg. F., the color of the fruit was dull and dark in sealed Pliofilms of high CO_2 retention (N1-170, P6-120, P6-75). The stems of these fruits were brittle, dry and showed evidence of "gas burn." The appearance of the fruit and stems in these packages was inferior to that of comparable lots held in plain paper liners. Best results were obtained by packaging in sealed FF-75 Pliofilm, with progressively poorer results in polyethylene, cellophane and Lumarith.

Discussion and summary

In these preliminary studies, fogging of the film was a serious defect of all but Lumarith. The diffusibility of CO_2 through this film, however, was too great to cause an accumulation of carbon dioxide and thereby provide protection against decay. Most of the various types of Pliofilm, when used in sealed packages, were too impervious to CO_2 to be used with safety in the packaging of sweet cherries during a period of simulated transport and marketing. Polyethylene with its wax-like translucency and low retention of CO_2, did not fulfill requirements of an ideal film. Cellophane crinkled badly after contact with the condensed moisture within the package during storage at 36 deg. F.; this wrinkling of the film greatly detracted from the appearance of the packaged fruit.

The ideal film for packaging sweet cherries during the period of shipment and retail marketing should give good visibility of the fruit and have strength; it should be porous enough to water vapor to prevent fogging, allow enough diffusion of oxygen to avoid anaerobic respiration, and retain carbon dioxide sufficiently to retard decay and preserve the original bright color of the

Prepackaging cauliflower curds in consumer cartons in the plant of Paul Dickman Farms, Ruskin, Florida.

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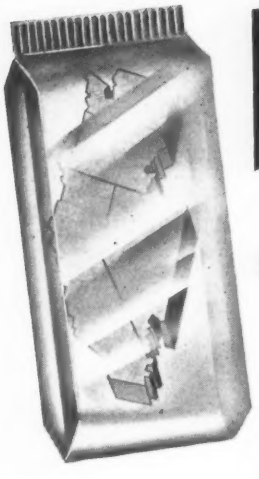

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fruit. Such a film has not yet come to our attention.

A film considerably more permeable to water vapor and yet slightly less impermeable to carbon dioxide than Pliofilm FF-75 should be ideal for packaging sweet cherries prior to shipment to Eastern markets.

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Gimbels to the rescue

An interesting sidelight on the article, "Changeover," in the February issue of MODERN PACKAGING, reporting on the various means by which packagers move or dispose of old stocks when introducing a new package, was revealed by a half-page Gimbels ad in the New York papers of May 9 offering a well-known brand of soapless detergent powder in a "hideous pink" box for half price in case lots.

Gimbels' ad copy tells the story:

"Gimbels saves you half because the manufacturer boxed his magnificent soapless detergent in a hideous pink box.

"All the manufacturer's taste was in his mouth. His product was perfect. It washed dishes like crazy. And bad as the color of the box was, the stuff sold like crazy. But the manufacturer's advertising agency persuaded the manufacturer he could quadruple sales if he boxed his product in pale aquamarine.

" 'So,' said the manufacture, 'I've always sold this stuff for 32 cents on the West Coast. Customers like it for 32 cents. I am not going to ruin my market out here to get rid of pink boxes.

"The agency said: 'We'll send it far away to the store (Gimbels) that sold more tables and mattresses in a single day than anyone else.'

"So they started the boats through the Panama Canal. . ."

Gimbels bought up the entire remaining stock of the product in the old package, at a price, and disposed of it in one day's smashing promotion that brought thousands of additional customers into the store.

Although Gimbels' ad did not identify the brand, it turned out to be Trend, manufactured by the Purex Corp., Ltd., South Gate, Calif.

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Using the EMP Cut-Off Register Control on your machine offers these 4 additional advantages:

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   Automatic registration allows the operator to give more attention to the functioning of the machine, thereby reducing "down time."
2. REDUCED INSPECTION COSTS
   Since register is maintained automatically, there is no necessity for constant visual inspection.

IMMEDIATE DELIVERY

3. EASE OF OPERATION
   Adjustments require only turning a thumb screw. No further attention is required once the Cut-Off Control has been set for a specific bag or wrapper.
4. IMPROVED PRODUCT APPEARANCE
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*Photo-electric scanner, electronic Thyrotron amplifier, motor, selector and differential switches.

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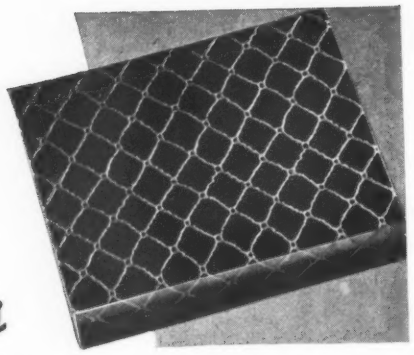

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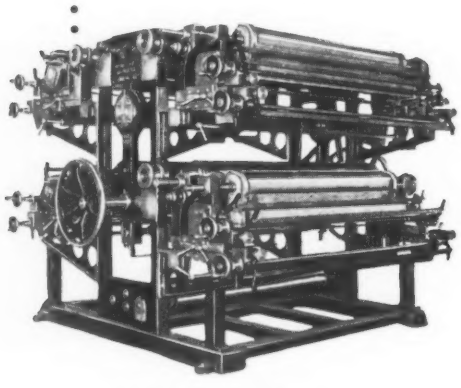

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Western conference program

Seeking to develop a program of maximum interest and value to attendees of the forthcoming First Western Conference on Packaging, Packing and Shipping (to be held concurrently with the First Western Packaging Exposition, San Francisco Civic Auditorium, Aug. 10 to 13, inclusive), the Conference Council has sent out over 425 letters and accompanying questionnaires to Western executives of commercial, industrial, trade association and agricultural organizations who are vitally concerned with problems and developments in packaging, packing and shipping.

The high percentage of response to the questionnaire —which requested suggestions for topics of first interest—indicates that Western companies are increasingly concerned with both the technical and sales promotion phases of packaging. Pre-packaging, package design, new equipment developments, new materials—these are among the subjects of greatest interest and value, according to the questionnaire returns.

Dr. William Rabak, Conference program chairman, who is associated with the Western Regional Research Laboratory, U. S. Dept. of Agriculture, has expressed great appreciation of the response to the questionnaire by Western executives and says, "With such interest and practical suggestions, the Conference Council will surely arrive at a well balanced, valuable three-day program that will be of direct benefit to the majority of attendees."

The Western Packaging Exposition will bring together for the first time in the West over 100 major companies engaged nationally or regionally in the manufacture or distribution of equipment, machinery, materials or packaging supplies. The exhibitors will each maintain a staff of experts at all sessions to offer up-to-the-minute advice or instruction on packaging problems and needs to Western packaging executive attendees.

The Western Package Exposition is sponsored by Clapp & Poliak, Inc., New York industrial exposition management firm, which has long directed many of the country's biggest industrial shows, including the AMA Packaging Expositions. Kenneth K. Dean of San Francisco is general chairman of the West's first major packaging exposition.

As of June 1 the Exposition space was, according to the management, approximately 85% contracted for and it was expected that the final list would total more than 100 exhibitors. Those who had already contracted for Exposition space included:

Amsco Packaging Machinery, Inc., Anderson Bros. Mfg. Co., Arabol Manufacturing Co., Associated Paper Converting Corp., Avery Adhesive Label Corp., Barrett-Cravens Co., Bemiss-Jason Co., Better Packages, Inc., Biner & Siegrist, Peter D. Bowley & Associates, R. M. Bracamonte Co., E. C. Buehrer Associates, Burt Machine Co., F. L. Burt Co., R. H. Butcher Co., California Barrell Co., Ltd., Carry-Pack Co., Ltd., Celanese Corp. of America, Ralph Chaffee & Co., Glen L. Codman Co., Crate-Rite Mfg. Corp., Crocker Union,

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easy to use — handy for travel — no waste — no spilling . . .

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One-way beer bottle campaign

A quarter million pieces of merchandising material ranging from store and window display cards to bottle toppers, carton stuffers and reprints of ads will be distributed this summer by Owens-Illinois Glass Co. to promote its single-trip Duraglas beer bottle.

The campaign got under way on May 23 with the first of three double-page, four-color advertisements in the *American Weekly* Sunday Supplement, which has a circulation of 9,000,000. A throw-over presentation has been built by the *American Weekly* staff and Owens-Illinois to tell the complete story of the one-way glass bottle to retailers, brewers and distributors who will be supplied with the merchandising material.

Central figure in all display pieces is a smiling girl known as the "Lookit Girl," painted by Jerome Rozen, prominent New York illustrator. The campaign theme stresses the convenience of no deposit and no return for the bottles. Advantages to brewer, wholesaler and retailer accruing through these features are stressed in the presentation.

ADAPTABILITY...

HEAT OR GLUE SEALS . . .

Cellophane, glassines, greaseproofs, metal foils, wax thermo-plastic and films.

WRAPS PRODUCTS OF ALL SHAPES

Stick candy, soap, candy bars, drug and food items and thousands of products in every field, regardless of shape, can be wrapped with this modern high speed machine that delivers up to 150 units per minute with label accuracy. Flavor and freshness are preserved by heat or glue moisture-proof sealing. And, because it "floats" the wrap around the product, fragile and irregular shaped products can be wrapped *without breakage.* Investigate the Campbell Wrapper for your product today. It saves you time, money, labor and materials.

Write for completely illustrated brochure.

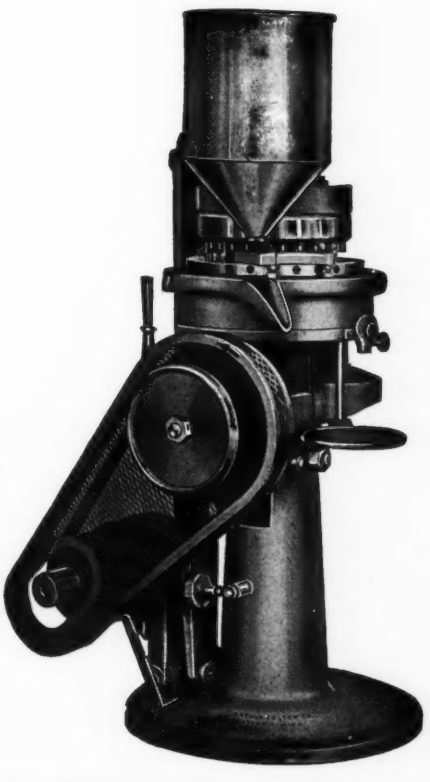
Campbell WRAPPER

HUDSON-SHARP MACHINE CO. • GREEN BAY, WIS.
Manufacturers

NEW
ROTARY TABLET PRESS

New series 200–25 tablet machine embodies years of experience in building equipment, incorporates refinements giving an entirely new standard of performance.

Special features include new variable lower punch pull-down track plus micrometer cell adjustment minimizing punch and die wear and practically eliminating capping; solid steel tie bar; centrally located main drive shaft; lower center of gravity. Range of operating speeds is provided by built-in variable speed drive. Power transmitted through lever operated disk clutch. Special drive materially reduces power consumption. Standard speed motor. Capacity per minute: 300–800 tablets. Diameter of tablet 3/16″ to 5/8″, maximum depth of cell: 11/16″. Floor space: 30″ X 36″, height: 60″, net weight: 1025 lbs.



ARTHUR COLTON COMPANY
2602 E. JEFFERSON AVE., DETROIT 7, MICHIGAN

OPTI-CHEK

WILL CUT

REGISTRATION TIME!

The simple fool-proof operation of the OPTI-CHEK will cut your registration time in half and eliminate idle presses . . . for color registering is done *off* the press and once your plates are in printing position the job is ready to run with no further adjustments necessary. Two OPTI-CHEK models are available — Model F for use with flat-bed presses and Model R for use with rotary presses.

ALSO SEE US FOR the very latest Cottrell-Heinrich press for printing in aniline, gravure or letterpress . . . in any order or combination.

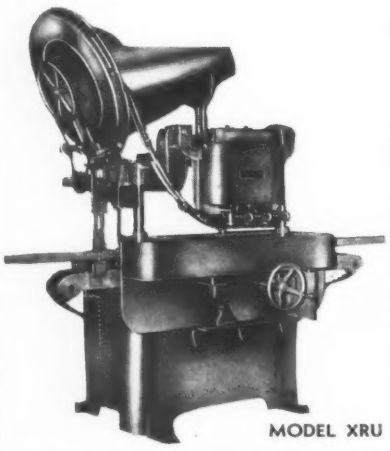
H. H. HEINRICH CO.
200 VARICK STREET
NEW YORK 14, N. Y.

Write for folder on either Model OPTI-CHEK or for further information on the Cottrell-Heinrich press.

Announcing....

NEW RESINA HIGH SPEED
STRAIGHT LINE SCREW CAPPER

Flexible • Fast • Fully Automatic



MODEL XRU

- Operates at speeds up to 250 containers per minute.
- Extreme flexibility permits capping of any type of container up to one gallon size.
- Changes over between various types of containers by a simple twist of a knob.
- Built-in conveyor, easily coupled to any packaging line. *Write for full information.*

Tops 'em all

RESINA Automatic Machinery Co.
Incorporated
Court & Creamer St, Brooklyn 31, New York

Sampling techniques

(*Continued from page 102*) to set up the folding boxes.

4. *Metal-edge boxes*—These containers with reinforced metal corners have had long acceptance as mailing boxes when an exceptionally sturdy container is demanded.

5. *Die-cut folders*—Special folders of sturdy weight paperboard may be designed to hold any type of sample, particularly when a flat mailer is required.

6. *Punch-boards*—The punch-board may be made by any good printer or box maker who has facilities for die cutting. It provides an excellent carrier for tablets sealed in strips of perforated transparent tape. Each tablet is provided with its own compartment and there is little chance of breakage. The punch-boards may be mailed in envelopes, cartons or folders.

7. *Textile bags*—For well protected, unbreakable samples, small textile bags with an address tag attached may sometimes be used, but the user must be sure such a flexible container will protect his sample.

8. *Mailing tubes*—Cylindrical fibre containers, sometimes with metal ends, are efficient for many types of mailings.

Check postal rules

Before starting a mail sampling campaign, an exact model of the proposed sample package, just as it is to be mailed, should be submitted to postal authorities to be sure that it will not violate any postal regulation. The Post Office can often make valuable suggestions on improvements, either to assure safe arrival of the samples or to reduce mailing costs.

Promotional inserts

Complete, clear directions must be included with every sample so that the recipient knows exactly how to use it. There is no need to crowd all of this information on the package, particularly if a miniature size is being used. Such information may be printed on a package insert. Sometimes for food products the inserts may be a recipe booklet. But always the detailed information should accompany the sample, not be sent separately. Sometimes the detailed information may be printed on the folder which is actually a part of the sample package (see illustration of Solventol sampler).

Sampling services

Some companies prefer to do their own sample packaging and distribution. If this is not feasible, there are a number of custom packers who can be employed to do the whole job—unit package the product, insert it in mailers and address it ready for the Post Office. There are firms such as Reuben H. Donnelley Corp. which will do the complete distribution job by mail. Peck Distributing Corp. in Brooklyn is an old hand at supplying crews and trucks for house-to-house distribution. Other firms such as W. S. Ponton, Inc., can supply specialized mailing lists to sample specific geographic

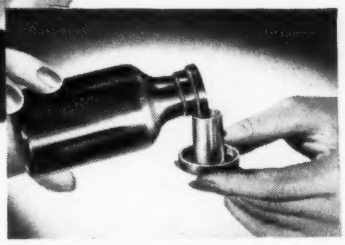
BAKELITE Polyethylene gives excellent color and appearance to caps for tooth-powder cans. They've a price advantage, too, and they float when dropped in the basin.

Alcohol-resistance is a must for perfume bottle bases. BAKELITE Polyethylene has it. Note the "press-fit" base that requires no cementing. A real production saving!

This antiseptic applicator again makes use of Polyethylene's chemical resistance. It holds about four times as much disinfectant as the standard glass rod.

Here's a stopper* that's a STOPPER!

High-Gloss, Flexible, Shatter-proof Closures That Actually Lower Capping Costs



Normal irregularities in bottle-neck size are allowed for by Polyethylene's flexibility. Thus these caps* fit snugly inside *and* outside the bottle lip. They measure a teaspoon, too.

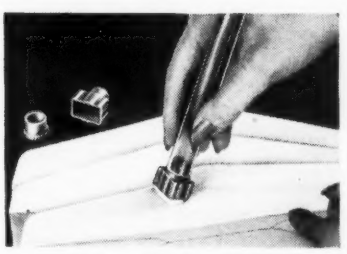
Yes, BAKELITE Polyethylene is now molded into caps and stoppers that really stop the show. And for the first time this material has been given a high-gloss finish.

For the first time, also, it makes available caps that require no liners . . . saving time, labor, materials and over-all capping costs. For it is inherently flexible, permitting dimensioning caps to a slight pressure-fit. Thereafter, the caps are automatically self-sealing, even on slightly irregular container lips.

BAKELITE Polyethylene is tough and flexible through a very broad range of temperatures. It is tasteless, odorless, highly resistant to acids, caustics, alcohol, nearly all strong chemicals. Moisture, mildew, age, sunlight and severe squeezing do not affect it. It has a warm "touch." It is available in a wide range of solid colors and pastel shades. And to cap the climax, it now is available with a glossy finish.

There are many other "packaging" uses for BAKELITE Polyethylene and VINYLITE Brand Plastics. Write Department DU-55.

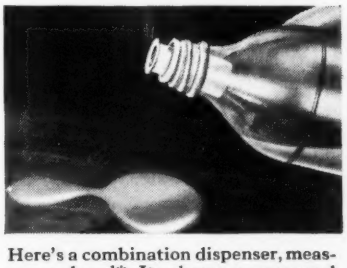
Data courtesy Sameric Engineering Co., Riverdale, N. J.
*Pat. Pending



Polyethylene adds to appearance in moistener closures*. It doesn't crack in water, swell up, or stick to the device, and the moisture hole itself remains open indefinitely.

TRADE-MARKS

BAKELITE
POLYETHYLENE



Here's a combination dispenser, measure and seal*. It releases a measured amount of liquid when pressed upside down on a surface. Doesn't scratch things, either.

BAKELITE CORPORATION
Unit of Union Carbide and Carbon Corporation UCC 30 East 42nd Street, New York 17, N.Y.

areas or covering homes where there are new babies, newlyweds, etc. Other firms such as Fisher-Stevens Service, Inc., specialize in physicians' and professional lists. R. L. Polk & Co. specializes in radio program sampling. There is a service for almost every phase of the sampling procedure.

Successful sampling should be based on the principle that the product itself is its best salesman. Sampling can be a profitable part of the merchandising program if carried out efficiently. The package that carries the sample to the consumer is a part of that efficiency and deserves the most thoughtful study.

CREDITS: *Miniature folding cartons for* **Wernets, Absorbine, Ingram's, Sal Hepatica, Ipana, Super Suds** *and sleeves for* **Camels** *and* **Luckies,** *National Folding Box Co., Inc., New Haven, Conn.* **Anacin** *envelopes, The American Paper Goods Co., New York.* **Clapp Instant Oatmeal** *envelope, Brown Bag Filling Machine Co., Inc., Fitchburg, Mass; folding carton mailers, The Wilkata Folding Box Co., Kearny, N. J.; set-up boxes for mailing (with and without wire fasteners), The Mason Box Co., Attleboro Falls, Mass. Catchbook and Sanitape-Sealtite packages for* **Anacin, Instant Chase & Sanborn Coffee, Empirin, Ajax, M-Beads, Squibb Penicillin, Winthrop Stearns** *products, Ivers-Lee Co., Newark, N. J. Miniature shipping container for* **Lucky Strikes,** *Container Corp. of America, Chicago. Metal-edge box for* **Abbott Nembutol,** *National Metal Edge Box Co., Philadelphia.* **Neocurtasal** *shaker container, Leeds Sales Co., Inc., Specialty Package Div., New York. Plastic vial for* **Winthrop Stearns Hemo-Genin,** *Celluplastic Corp., Newark, N. J. Punch-boards, The Wilkata Folding Box Co., Kearny, N. J. Set-up box for* **Tresanoids,** *Walter P. Miller Co., Inc., Philadelphia.*

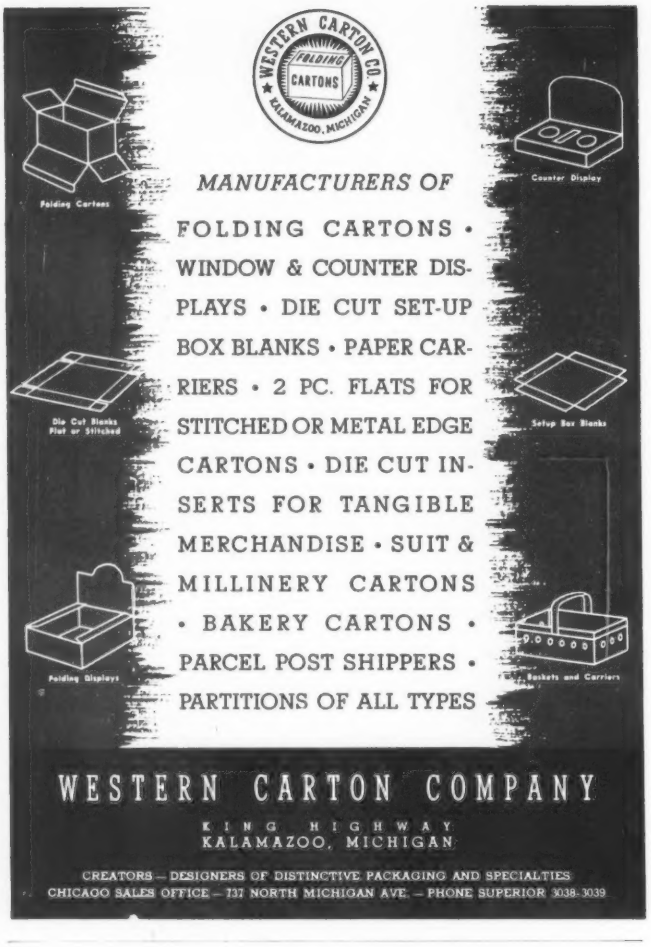
Shipping container report

Shipping Container Committee D-10 of the American Society for Testing Materials presented the long-awaited list of definitions with its recommendations to the Society for approval during the recent meeting of the committee in Cleveland.

Also recommended to the Society by the committee was a vibration test method which has been studied for some time. Several proposed new standards were recommended for letter ballot of the committee including a drop test for cylindrical containers, a method of test for the water-vapor permeability of containers other than shelf-sized packages and a method of testing the penetration of liquid into containers.

A special subcommittee was appointed during the meeting to make a study of test methods for localized impact for large sized containers or crates. The initial program outlined by the subcommittee on performance standards included (1) a classification of various articles to be shipped, (2) evaluation of the different kinds of shipments used and (3) determination of the requirements in each standard test method, such as the number of falls or drops.

A list of 41 materials used for interior packing purposes has been prepared by the subcommittee on interior packing, it was reported. This subcommittee has also completed a bibliography containing 50 references and a presentation of a proposed list of 75 definitions.


WESTERN CARTON CO.
FOLDING CARTONS
KALAMAZOO, MICHIGAN
MANUFACTURERS OF
FOLDING CARTONS • WINDOW & COUNTER DISPLAYS • DIE CUT SET-UP BOX BLANKS • PAPER CARRIERS • 2 PC. FLATS FOR STITCHED OR METAL EDGE CARTONS • DIE CUT INSERTS FOR TANGIBLE MERCHANDISE • SUIT & MILLINERY CARTONS • BAKERY CARTONS • PARCEL POST SHIPPERS • PARTITIONS OF ALL TYPES
Folding Cartons
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Die Cut Blanks Flat or Stitched
Setup Box Blanks
Folding Displays
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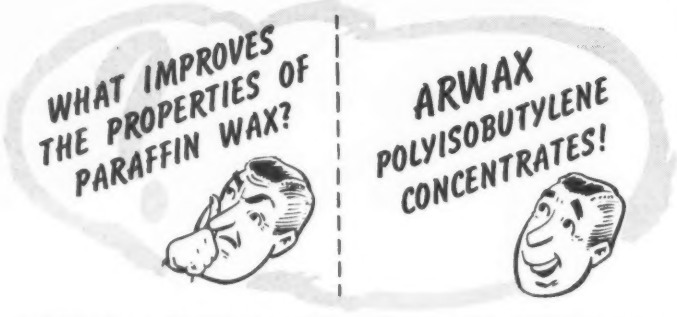
CREATORS — DESIGNERS OF DISTINCTIVE PACKAGING AND SPECIALTIES
CHICAGO SALES OFFICE — 737 NORTH MICHIGAN AVE. — PHONE SUPERIOR 3038-3039



ARWAX POLYISOBUTYLENE CONCENTRATES improve the properties of paraffin wax by eliminating the one obvious disadvantage manufacturers find in paraffin . . . brittleness. ARWAX makes paraffin flexible . . . imparts qualities to paraffin that make it a better coating material for packaging applications.

While insuring greater flexibility, ARWAX also improves tensile strength . . . upgrades partially refined paraffin . . . provides maximum bond strength and increases moisture-vapor resistance.

ARWAX is economical . . . easy to add to paraffin wax . . . requires no additional machinery. Because ARWAX is a concentrate of Vistanex Polyisobutylene in paraffin wax, it's easy to handle. Adding Vistanex to paraffin wax is painless when you use ARWAX.

Vistanex — Trade Mark Enjay Corp.

Write for complete information TODAY.

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PEABODY, MASS.
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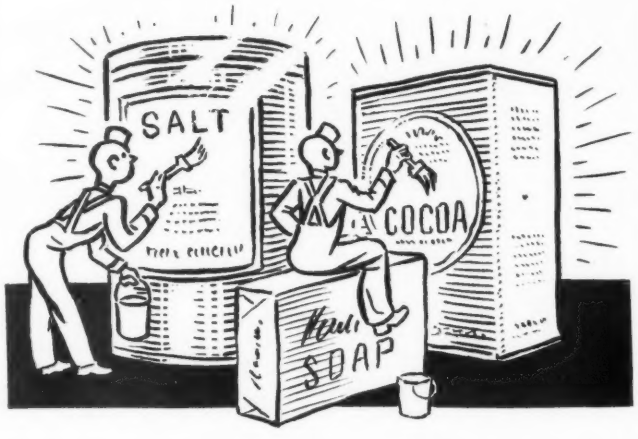


PYROXCOTE*PAPER LACQUERS

add color and gloss, as they protect.

Your own label, canister wrap, tite wrap or package component is vulnerable to this improved method of finishing. Applied by conventional varnishing machine method, Pyroxcote Moistureproof paper lacquers can be succesfully adapted to your package needs.

Your nearest Pyroxylin engineer will work with you and your finishers.

*Trade Mark Reg. U. S. Pat. Office

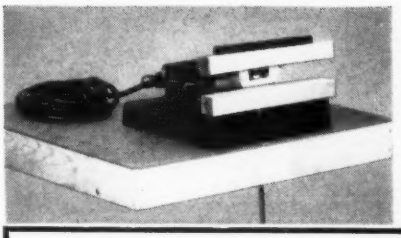
PYROXYLIN PRODUCTS, INC.

CHICAGO 32

PAOLI, PA. WICHITA, KAN.

CONVERTERS and JOBBERS

Here's the Modern Way to Heat-Seal Plastic Film a Low Cost . . . .



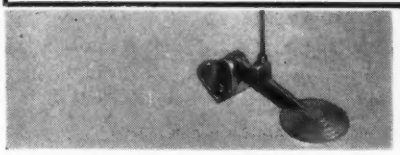
AIR TIGHT
LIQUID TIGHT
MOISTURE TIGHT

With the Foot-Operated

CRIMPMASTER

Model "B" Heat Sealer

- For Extensive Sealing Operations
- Operates on 110 volt A.C. or D.C.
- Approved by Underwriters Laboratory



$59.50

RETAIL PRICE

or with the Hand-Operated

CLAMCO

Heat Sealer

- For Home or Commercial Use
- Operates on 115 volt, 60-cycle A.C.
- Approved by Underwriters Laboratory

$7.95 **RETAIL PRICE**

OUR heat sealers give complete satisfaction when used on Cellophane, Goodyear Pliofilm, Polythene Sheeting and all other types of heat-sealing films, foils and papers. We invite your inquiry and will gladly extend further information and details about our heat sealing equipment. Send in the coupon below—Today!

CLEVELAND LATHE & MACHINE CO.

Leaders in Lower-Price Heat Sealing Equipment Since 1936

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Send me more information on ( ) CRIMPMASTER Model "B" Heat Sealer ( ) CLAMCO Heat Sealer; ( ) Converters' Discounts; ( ) Jobbers' Discounts

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THILCO Embossed PAPERS

give your package "eye appeal that you can feel"

DISTINCTIVE *third dimensional* texture, *plus* protection, is economically achieved with Thilco Embossed Papers. Modern packaging engineers readily recognize the advantages of embossed papers for adding decoration, prestige, identification and eye appeal to their products. Thilco's facilities for standard or friction embossing in custom or stock designs may be complemented by aniline or gravure printing in our own plant to provide a *complete* decorating service. Our skilled staff of artists, craftsmen and technicians scientifically adapt the decoration to the *protective* paper in the versatile Thilco line which best meets your requirements, to assure you a distinctive protective wrapper *tailor-made for your own specific packaging problem.*

The complete line of Thilco Functional Papers includes Asphalt waterproofs, Waxed thermoplastics, Glassines and Greaseproofs, Specialty Krafts . . . and custom Bags of every description.

THILCO Functional PAPERS

1947 Welch Award

The Charles S. Welch Award for the most effective package in the toilet goods field during the past year was presented to Richard Salomon of Charles of the Ritz, Inc., New York City cosmetic firm.

The presentation of the award was the high spot of the luncheon on the opening day of the 13th annual convention of the Toilet Goods Assn. and was made by Joseph Keho of Dorothy Gray, Ltd., chairman of the association's award committee.

The award, first granted by the association three years ago in memory of the former secretary of TGA, was given to Charles of the Ritz for its face powder gift package.

The package consists of an empty face powder box which is placed inside a plain white two-piece paperboard box that is wrapped in a gray mottled paper and decorated with a broad gold foil band embossed with a crest using the initials CR. The bright green satin ribbon around the sides of the package is held in place by gold paper seals also embossed with the crest. The ends of the ribbon are left free and on one end is the gift certificate which allows the recipient of the gift package to have the empty box filled with face powder blended to her own order at any Charles of the Ritz counter. The complete gift package was designed by Ethel Franklin, the company's package designer.

During the three-day convention, held at the Waldorf-Astoria, New York, members of the Toilet Goods Assn. heard speakers representing the major outlets for their products—department stores, chain drug and variety stores, wholesale and independent druggists—discuss "The Outlook for Cosmetic Sales in Competition for the Consumer's Dollar."

Dr. Howard W. Haggard, director of the Laboratory of Applied Physiology, Yale University, gave an interim report on the association's research program. Labor relations in the cosmetic industry were summarized by John P. Currie of Currie & Gherman.

A film on televised programs, presented by George W. Wallace of the National Broadcasting Co. during a luncheon session, was closely studied by the audience. In his introductory remarks, Mr. Wallace said that cosmetic manufactures could appreciate how important packages were in television commercials since they are "experts in package merchandising". To date there has been no television sponsorship by any cosmetic firm.

Technical matters occupied the final sessions of the convention when eight papers were read dealing with chemical aspects of perfumes, soaps, etc. Dr. Arthur R. Cade of the research laboratories of Bivaudan-Delawanna, Inc., brought the meeting to a close with his address on "Bacteriostasis and Its Application to Toilet Goods Products."

Package Photos Reproduced from MODERN PACKAGING Magazine

WALDRON
CONVERTING
MACHINES

Materials For Packages Shown Were Produced On WALDRON MACHINES by
American Can Co.
Aluminum Co. of America
Celanese Plastics Corp.
Crown Cork & Seal Co.
Dobeckmun Co.
Gaylord Container Corp.
Kupfer Bros. Co.
Milprint, Inc.
Reynolds Metals Co.
Riegel Paper Co.
Sylvania Div.
U.S. Envelope Co.
and others

Part of the pictures of popular packages are the WALDRON Converting Machines used in processing and finishing the packaging materials. For Coating, Printing, Saturating, Waxing, Embossing, Laminating, Waterproofing and similar operations on paper, fabric, foil, film, etc., WALDRON machines are practically standard equipment throughout the industry. There's a WALDRON machine to give added beauty, durability, utility to your packaging product. Consult us on your needs.

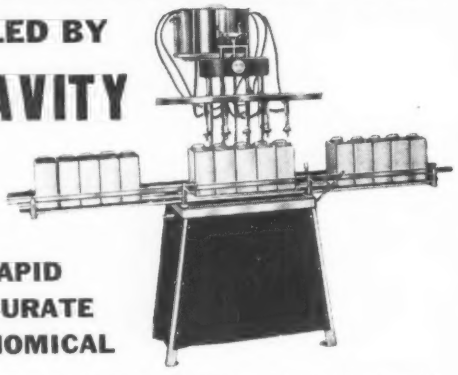
The experience of our Research and Development Staff and facilities of our Testing Laboratory are at your service.

JOHN WALDRON CORP.
Main Office and Works
New Brunswick, New Jersey
MACHINES

GALLON CANS

FILLED BY

GRAVITY



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ACCURATE
ECONOMICAL

THE PACKER GRAVITY FILLER has been designed to answer the requirements of manufacturers filling two-gallon, gallon, quart and pint cans. Speeds up to 40 containers per minute, depending on the size of container and consistency of liquid. Will also fill glass containers in similar sizes.
VACUUM fillers also available in 3 to 12 spout models. Change from one method to the other quickly and easily.

IMMEDIATE DELIVERY • MODERATELY PRICED
Write for free descriptive literature.

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Decorators and Printers

Creative **—means the finest decoration on your glass, plastic or metal container—**

Creative **—means unlimited production facilities—**

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Creative **PRINTMAKERS, INC.**
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Surface Decorators for the Packaging Field
IN CANADA: 2424 YONGE STREET, TORONTO, ONTARIO

Appley new AMA president

The appointment of Lawrence A. Appley, vice president of Montgomery Ward & Co., as president of the American Management Assn. and the elevation of Alvin E. Dodd, AMA president for the past 12 years, to the newly created post of honorary president has been announced by John M. Hancock, chairman of the board of AMA and a partner of Lehman Bros.

L. A. Appley

Mr. Appley, a former deputy chairman and executive director of the War Manpower Commission, will leave Montgomery Ward on July 1 to assume direction of the activities of AMA's membership of more than 12,500 industrial executives. He will, however, continue to serve Montgomery Ward as a director.

Mr. Dodd, this year's winner of the Gantt Medal for "distinguished achievement in industrial management as a service to the community," will continue as an AMA director, devoting his attention to international aspects of management, liaison with other private and public organizations and matters of policy. Mr. Dodd has served as AMA president during more than half the association's 25 years. Under his leadership, membership of the association grew from a few hundred companies to more than 12,500. Prior to his association with AMA, Mr. Dodd had been with Kroger Grocery & Baking Co., Sears Roebuck & Co., the U. S. Chamber of Commerce and the Retail Research Assn.

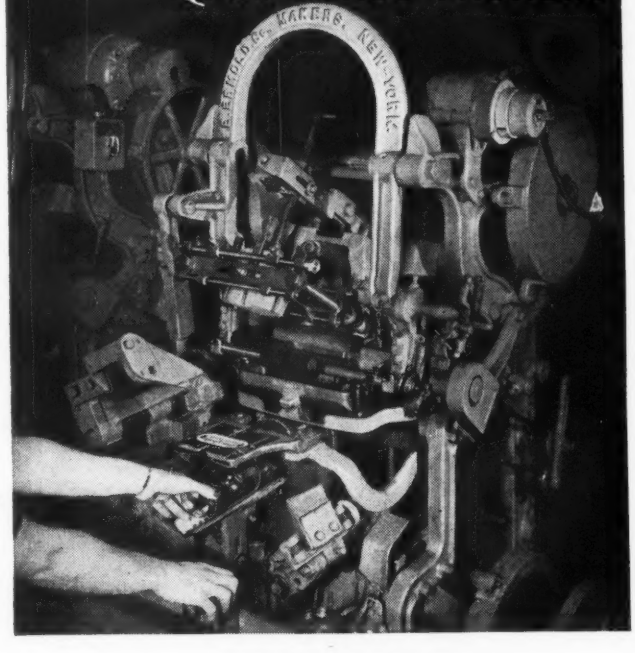
Mr. Appley, an expert in industrial relations, accepted the full-time responsibilities of AMA chief executive as a "unique opportunity to contribute to the science of management." He said that "much of the future of the nation depends on management's professional ability to achieve lasting cooperation with labor, to find means to stabilize the national economy and to integrate the organization of the nation's industry with the nation's social structure."

AMA's new president is a graduate of the Ohio Wesleyan University. His business career started with Socony-Vacuum Oil Co., Inc. In 1941 he became the vice president in charge of personnel for the Vick Chemical Co. and later a member of its board of directors. In March of 1946 he assumed his present duties as vice president for personnel and a director of Montgomery Ward.

During the war Mr. Appley went to Washington as an expert consultant to the Secretary of War on civilian personnel. Later he became executive director of the War Manpower Commission and then was made deputy chairman. In 1946 he was awarded the Medal for Merit by President Truman.

From 1942 to 1944 Mr. Appley served as an AMA vice president in charge of personnel. He has also been a member of the AMA executive committee and a director.

CLOSE-UP { OF 3-WAY SAVINGS FOR GLASS PACKERS



...on the ERMOLD
Semi-Automatic Labeler!

Saves Time—Changeover from one size jar or bottle to another is quick and easy. In a matter of minutes, it's ready to go—on another product in your line.

Saves Equipment—*One* Ermold Semi-Automatic Labeler is enough to take care of a wide variety of sizes, styles and shapes . . . from gallon containers down to tiny ampules.

Saves Maintenance Costs—Simple operation and sturdy construction—especially of moving parts—reduces machine jamming, upkeep and repair bills to a minimum.

. . . **For volume output** of standardized lines, your best bet is the Ermold Automatic Multiple Labeler. It labels 4, 6, 8 or 10 jars or bottles *at one time* . . . on sizes from splits to quarts . . . at an economically slow speed of only 20 cycles per minute.

Over 68 years of labeling leadership

EDWARD Ermold COMPANY
Founded 1880 Incorporated 1912

652 HUDSON STREET, NEW YORK 14, N. Y.

Rayco Flock

Want to make your new package a "Plush Job"?
Use the new Coverings!

Use the new coverings made with Rayco Flock to make your new package pleasing to the eye and inviting to the touch. These rich flocked coverings are available from your supplier in all colors, on paper, cloth and cardboard for all box, wrapper and container purposes. And remember—to get the really fine effects of genuine suede leather, velvet, velour, etc., use the Rayco Flock specifically developed and proven for each job, specially processed under exclusive methods.

SUEDE FINISH - -

"Raymix"—a flock of rayon fibres under U. S. No. 427949 to produce a suede effect of utmost realism on any surface.

"Kingcote"—a cotton flock trademarked under U. S. Patent No. 423572, producing a suede effect at minimum cost.

PLUSH, VELVET AND VELOUR FINISH

"Raycote"—a flock composed of uniformly cut rayon fibres to produce on any surface a pile effect such as velvet, plush or velour. Made under U. S. Patent No. 2014947.

AVAILABLE IN ALL COLORS
REQUEST FREE COLOR CARD
and FREE WORKING SAMPLES

Rayon Processing Co. of R. I., Inc.
PIONEER PRODUCERS OF
SURFACE-COATING FLOCKS

110 Tremont St. Central Falls, R. I.

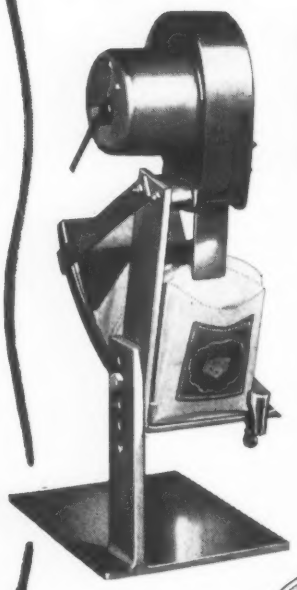
ROUND TUBES AND PACKAGES
Available Now!

PACKARD offers spiral-wound round tubes and containers in all conceivable lengths and diameters—drum-shape, long, thin, flat. Sturdy and light-weight, PACKARD containers are perfect for any dry commodity—foods, drugs, chemicals, cosmetics, toys, novelties, insecticides, electrical products, shipping, textiles.

And these low-cost containers are available *immediately!* Whether you choose metal-end or paper-cap, plain or labelled—watch your product go in a PACKARD package.

PACKARD CONTAINER CORP.
5811 Park Avenue West New York, New Jersey
Phone Union 5-5818

TAKE A LOOK AT THIS
Anderson PORTABLE BAGGER



SPEEDY
EASY TO USE
LOW IN COST

Designed to handle bagged products with a minimum of effort at a maximum speed. Simple adjustments for height... tilting forward or backward enables operator to set machine at easiest position. Stainless steel trough with capacity of 200 bags. Adjustable to bag sizes. Blower keeps bag clean and free from foreign matter.

Write for Bulletin 6-29

ROCKFORD
Anderson
BROS. MFG. CO.
ILLINOIS

Canned juice vendor

An automatic vendor of canned, refrigerated fruit and health drinks made its national debut recently in nine widely-diversified locations of the Greater New York area. The "Tele-Juice" machine is made by Telecoin Corp., national distributor of automatic merchandising and service equipment.

Three Tele-Juice vendors began operation to serve thirsty travelers at LaGuardia Airport. Others are serving editorial, financial and clerical workers at Fairchild Publications, Merrill Lynch, Pierce, Fenner & Bean brokerage office, American Lumberman's Mutual Casualty Co., Liggett's drugstore at Broadway and Fulton St. and industrial plants in Brooklyn and Morristown, N. J.

The machines were all stocked for initial operation with a choice of six flavors of pure juices; orange, grapefruit, an orange-grapefruit blend, apple, tomato and Choc-Treat, a chocolate milk Each machine holds 300 cans simultaneously, 50 to a rack, and vends a 6-oz. can for a dime.

The Tele-Juice machine operates on a gravity principle. Unique sanitary features include its enclosed compartment for the can opener, a self-contained disposal unit for empty cans and a straw dispenser. A foot pedal operates the knife, which is kept at a constant temperature of 180 deg. F. to prevent rust and bacterial growth.

Jack M. Cross, manager of Telecoin's Tele-Juice division announced that others will soon be in operation at several large industrial plants in the Middle Atlantic states and in other sections of the country.

E. A. Throckmorton dead

News of the sudden death of E. A. Throckmorton in Chicago on June 8 came as a shock to his friends, many of whom had watched him preside over a consumer packaging clinic at the AMA Conference in Cleveland on April 29. Mr. Throckmorton was one of the best known men in the packaging field. He had worked very hard in assembling the conference panel and the unique visual presentation which accompanied it.

Mr. Throckmorton, who was 46, had suffered a coronary thrombosis several months ago, but was considered to have recovered completely. At his death he was president of Container Testing Laboratories, Inc., and prior to assuming that post in May, 1946, he had been a vice-president of Container Corp. of America. He leaves his wife, Caryl Dunham Throckmorton, two sons and three daughters.

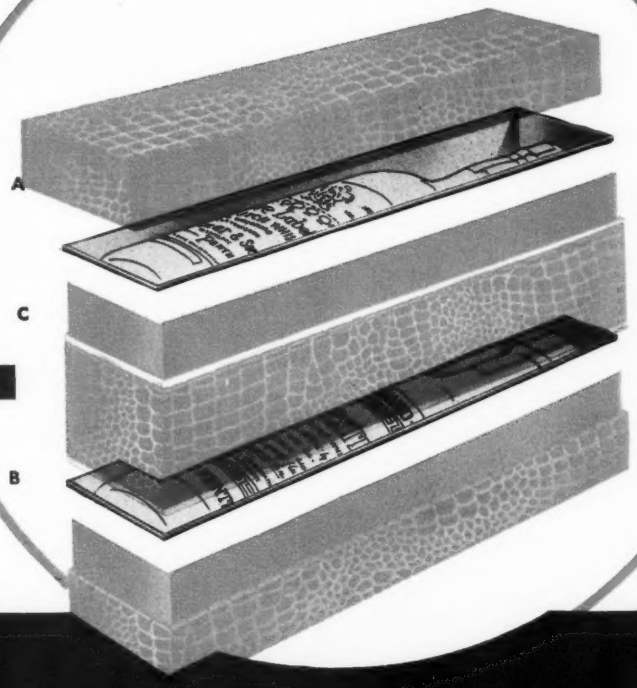
A Package
Idea that's equal
to the "Spirit of the Occasion"

As a Solo — or as a Twosome — it's more "Toothsome"!

SOLO

Unique idea for gracious giving. Available at cost when asked for. Offered by Vendome Liqueur, Inc., N.Y.C. It nests one bottle as shown above or—by adding an interfitting section (C) shown below, the unit becomes a two-bottle package. Mfd. by Paragon Box Corp., Brooklyn, N.Y

TWOSOME



—*Lush as Plush* thanks to *Flocked* papers!

Box papers, luxuriously surfaced with richly-colorful flock and embossed in a selection of custom-simulated patterns are carried as roll or cut stock by the *better-quality* paper merchants. Upon investigation, you'll find too that their *best-quality* velvetized offerings are processed with Claremont Flock! Claremont Flock is uniform; responds perfectly to adhesive preparation, and forms a deep-pile foundation that won't fuzz, separate, crack or rub-off!

Flock.. Ammunition for the Imagination!

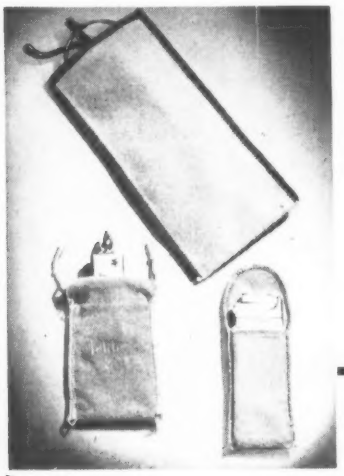
Claremont Flock . . . (cotton, rayon, wool) . . . in 18 brilliant colors are unexcelled in the art of make-believe. Rich, deep-tufted surfaces economically bespeak luxury! Serve both decoratively and functionally. In addition to industry's use of Claremont Flock on board and papers, it is also sold by weight to processors, for application to almost any adhesive-prepared surface by nozzle spraying, by vibration screening or by hand. At minimum cost, the results assure maximum allure. Complete details, color cards, samples and prices upon request. Inquiries invited!

CLAREMONT
WASTE MANUFACTURING COMPANY
CLAREMONT
N. H.

SEWN CONTAINERS *mean* SALES PROTECTION

Increase the saleability of your fine accessories and novelties by protecting their surfaces with these soft, sewn fabric bags, envelopes and pouches. By covering your products with sewn fabric containers, you can eliminate disfiguring scratches and abrasions which often stop sales cold.

Made of colorful, rich flannel (including tarnish preventing), velvet or rayon, Ohio sewn containers can be screen printed with your trademark for easy identification. Slide fasteners, snap and drawstring closures are available.



Ohio would like to send you samples of these inexpensive sewn fabric aids to merchandising.

Write for them today.

Sewn Fabric Containers

OHIO MFG. CORP.
1402 Edward L. Grant Highway
New York 52, New York

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Modern Plastics Encyclopedia
Modern Packaging Encyclopedia

122 East 42nd Street, New York 17, N.Y.

Industrial design on increase

Reliance on trained industrial designers to give packages consumer appeal from an art, engineering and merchandising standpoint has increased nearly 50% in the last decade, according to a survey by the American Management Assn. in collaboration with the Society of Industrial Designers.

Responses from 133 companies show that designers are employed by more than 90% of companies manufacturing consumer products, 80% manufacturing packages or products sold in packages and 70% of firms manufacturing industrial goods.

In more than a third of the companies the design of the product or its package was considered so important that the choice of the designer and the supervision of his work are made the responsibility of top management, often the president of the company.

Only 25% of the companies producing consumer goods depend for their designs entirely on consultant designers. Where consultant designers are used, the survey showed that approximately half of the companies favored the retainer basis for fees. In the other half, a fee for each job was one basis of payment and a very small percentage preferred royalties or fee plus royalty basis of payment.

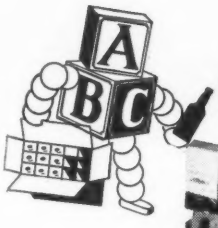
Where industrial designers are on the staff for all products the companies relied on them heavily, only calling in consultants 10% of the time. This is generally true, according to the survey, for companies employing designers on packages and major exhibits. Companies also depended on the staff for the design of offices and display rooms, and even for designing of retail outlets and special printed matter.

The survey has been published in the form of a report titled "American Business and Industrial Design." Copies of the pamphlet which includes charts and graphs of the statistical information may be purchased for 50 cents at American Management Assn. offices, 330 W. 42nd St., New York.

Packaging conserves grain

Better packaging as a means of implementing the Secretary of Agriculture's proposed voluntary grain conservation agreement for the baking industry is urged by Harvey H. Robbins, secretary of the Laminated Bakery Package Research Council. He pointed out that laminated packages help to retain freshness, quality and flavor longer, thereby substantially extending the shelf life of baked goods.

"Packaging that will keep a product salable longer would seem to be an important factor in any conservation program. Laboratory tests by leading packaging manufacturers prove that laminated packages do this. The laboratory results are backed up by the experience of some of the biggest wholesale bakers in the country, who find this type of packaging a valuable sales stimulant," said Mr. Robbins.



A-B-C CASE UNLOADER and UNSCRAMBLER

SPEEDS PRODUCTION . . . CUTS COSTS . . .
AUTOMATIC . . . NO OPERATOR REQUIRED

A-B-C Case Unloader and Unscrambler speeds production . . cuts costs for packers whose containers are received packed in re-shippable cases. This new machine automatically empties the case, unscrambles the empty glass containers and delivers them to the conveyor in single file, ready for filling. The empty case can automatically be carried to the filling line for repacking. Get new folder containing complete details. Write A-B-C Packaging Machine Corp., Dept. M7, Moberly, Mo.

FEATURES

- RELEASES UP TO 3 EMPLOYEES
- HANDLES GLASS CONTAINERS OF ALL SIZES
- AUTOMATIC AND FULLY ADJUSTABLE
- REDUCES BREAKAGE
- TESTED THREE YEARS UNDER NORMAL PACKING CONDITIONS

A-B-C PACKAGING MACHINE CORP.
MOBERLY MISSOURI

OTHER A-B-C PRODUCTS
Automatic Top and Bottom Case Sealer • Automatic Side Case Sealer • Semi-Automatic Bottom Sealer • Hand Gluer.

METRIC STREAM FILLER

Model A PAK KING filler is ideally adapted for packing a wide range of powders from very finely ground to coarse granular materials. Its versatility is indicated when used with the following products—pepper, chili powder, cinnamon in small canisters; coffees in all grinds for restaurant bags; coffee powder in jars; teas in cartons or bags; grated cheese in bags or containers; chocolate mixes and cocoas in canisters; drugs or chemicals in bags or small vials and bottles. Operates at a set speed with option to 60 or more per minute and as low as 10; volume discharges can be varied at will while stopped or running; accurate on many materials of better than $^1/_{16}$ oz and others of better than a gram. Minimum of dust at the discharge spout. Range approximate zero to 10 ozs. Illustrated semi automatic machine but full automatic Model A1 filler now available at speeds of 60 or more per minute at considerable less initial and maintenance costs than comparative fillers or augur packers.

FEATURES:

Simplicity with compactness, fingertip control with micrometer screw type knob, optional speed with variable V pulley, enclosed dustfree operation, ball bearing sealed drive, easily cleaned; inspection covers for hand fill or pipe supply.

Ask for circular No. 44 for related packaging equipment, net weighers, fillers and sealers.

WEIGH RIGHT Packaging Machinery

WEIGH RIGHT AUTOMATIC SCALE COMPANY
JOLIET • ILLINOIS • U. S. A.

ROTOGRAVURE CYLINDERS

A Complete Service
All Under One Roof and
One Management Responsibility

- Cylinder Machining
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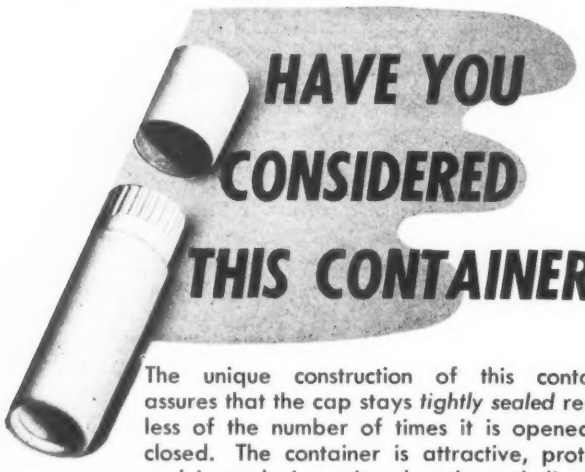
- Photography and Art Work
- Cylinder Engraving
- Hard Chromium Plating

CHAMBERS-STORCK COMPANY, INC.

751 North Main Street
Norwich, Conn.



HAVE YOU CONSIDERED THIS CONTAINER?

The unique construction of this container* assures that the cap stays *tightly sealed* regardless of the number of times it is opened and closed. The container is attractive, protective and is made in various lengths and diameters. It is perfect for safe packaging of ampules, vials, pencil leads, roll film, fountain pens and points and many other products.
We can apply your label to any surface of this container or print the container, one color ink on white or colored stock.
Adaptable to automatic filling and closing.
The box that adds shelf appeal while affording perfect protection.
Ask for samples and prices.

* Pat. Pending

NIEMAND BROS. Inc.

37-01 35th Avenue Long Island City 1, N. Y.
RAvenswood 8-0909

Displays prove sales-getters

Discussions at the second annual symposium of Point of Purchase Advertising Institute, held in New York recently covered every major factor in point of purchase display material. Speakers at the meeting included representatives of a large distiller, a manufacturer of electrical products, a toilet preparation and a popular-priced cigarette.

The effectiveness of window displays was said to have increased sales as much as 109% in those stores where the Institute's current test survey has been under way since April 1. According to J. Ward Maurer, Wildroot Co.'s advertising manager, the test proves the value of a continuing survey and the Institute members were urged to undertake a permanent research program.

During his presentation of the "Golden Spike" promotion for Seagram's Ancient Bottle Gin, George Mosley stressed the importance of utilizing all forms of advertising, especially when there is a "plus" which cannot be used as a talking point. Media used in the campaign included window, bar and counter displays, special recipes and cocktail muddlers. An original Dean Cornwell painting of the driving of the golden spike at the completion of the first transcontinental railroad was utilized as a promotion during the campaign.

A test advertising campaign undertaken by the Advertising Committee of the Radio Manufacturers Assn. was described by J. Herbert Stickle of the Westinghouse home radio division. Both advertising and display were used in Hartford, Conn., with display predominating, during the two-week test, while in Providence, R. I., said Mr. Stickle, "they just let nature take its course." The two cities were similar market wise, the speaker explained, but nearly 3,000 radios were sold in Hartford and slightly less than 900 in Providence.

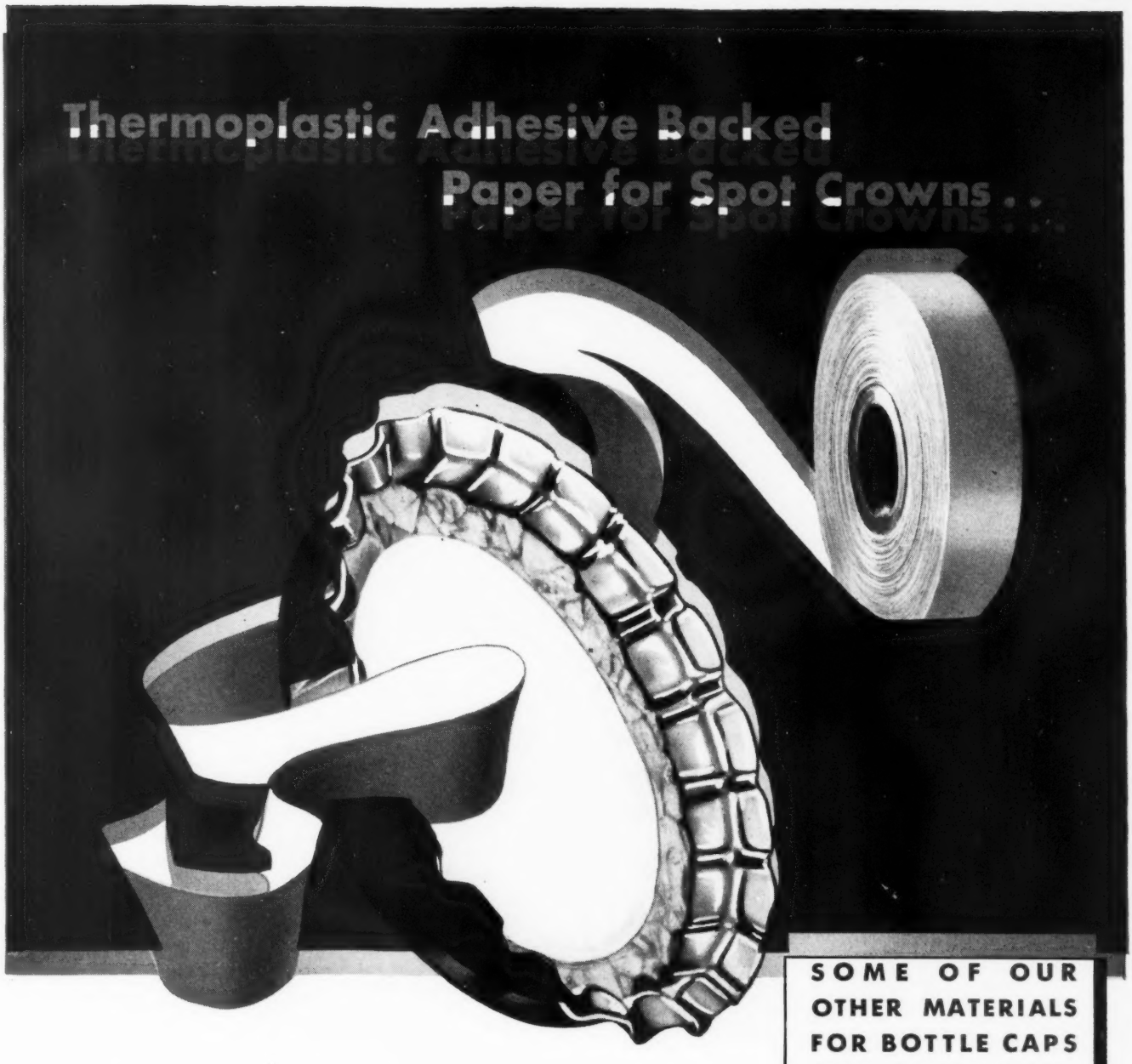
By motivating salesmen to use display material Philip Morris & Co. has been able to cover a field which includes more than one million outlets with a sales force of about 500 men, according to Zenn Kaufman, merchandising manager for the cigarette firm.

During Mr. Maurer's talk he detailed the window display test in Rochester and Syracuse, N. Y., which was planned with the cooperation of the display committee of the Assn. of National Advertisers and is being conducted by Fact Finders Assn. on behalf of Point of Purchase Advertising Institute. A total of 120 drugstores and 40 hardware outlets are being utilized, with four typical products in each field.

Until the survey has been completed and all figures checked, Mr. Maurer said, it is impossible to be too conclusive. However, he reported that in addition to sales increases up to 109% for those products represented, competitive products not sharing in displays showed sales losses of from 2 to 20%.

CORRECTION. The paperboard folder used as a package for Seagren candy-decal cake decorations, illustrated in Packaging Pageant for May (p. 137), was incorrectly credited to Bordwin Paper Co. The folder is supplied by Dorwin Paper Corp., New York.

Thermoplastic Adhesive Backed Paper for Spot Crowns . .



Designed for high productive speed, quality and economy.

- **STRONG BOND TO CORK AT HIGH SPEEDS**
- **NON-BLOCKING IN ROLLS**
- **UNIFORM THICKNESS THROUGHOUT**
- **RESISTS WATER, CHEMICALS AND MOISTURE**
- **ODORLESS, TASTELESS and NON-TOXIC**

Available in DRAB EXPRESS, VINYLITE, PANASEAL, REZIZTOL, SARAN

We are prepared to give your inquiry immediate attention.

SOME OF OUR OTHER MATERIALS FOR BOTTLE CAPS AND FOOD PACKAGES.

Coated Aluminum Foil

Polyethylene Coated Paper and Laminated Film

Saran Coated Paper and Laminated Film ★

Laminated Foils and Paper

Laminated Cellophane—Acetate—Pliofilm and Paper

Protecote Food Wrappers

General Felt Products

DIVISION OF STANDARD CAP AND SEAL CORPORATION
68 THIRTY FIFTH STREET BROOKLYN, 32 • N.Y.

Serving the Closure Industry for over 25 years

Personalize YOUR PACKAGE WITH THE "PACER" MODEL HEAT-SEALER

EMBOSSES TRADE-MARK OR NAME RIGHT IN THE SEAL

Lend prestige to your package . . . individualize your product! No extra time . . . no extra labor . . . no extra material required. Name or trade mark can be embossed while bag is heat sealed in one simple operation! One of many exclusive features available with Heat Seal-It Equipment.

Automatic and Foot Power Heat Sealers; Rotary Heat Sealers; Hand Sealing Irons; Bag Making Machines

WRITE FOR CATALOG

HEAT SEAL-IT COMPANY
4316 LANCASTER AVE., PHILADELPHIA 4, PA.

FOR BETTER PACKAGING!

PARTITIONS
THAT PROTECT AND SAFEGUARD YOUR PRODUCTS

IMMEDIATE ATTENTION
Given to Requests for Estimates

Prompt Deliveries Guaranteed

Reasonable Prices Assured

WRITE, PHONE, WIRE for QUOTATIONS on YOUR REQUIREMENTS

Manufacturers of Paper Board Partitions

PETER PARTITION CORP.

19-21 HEYWARD STREET
BROOKLYN 11, N. Y.
Telephone: TRiangle 5-4033

British package research

Progress in packaging research will be greatly expedited in Britain when the British Printing, Packaging and Allied Trades Research Assn. (PATRA), moves from its restricted, temporary accommodation in which it has worked in London since its laboratories and equipment were destroyed in an air raid during the war, to its £100,000 research center nearing completion at Leatherhead, in Surrey.

Determining and improving the protective qualities of packaging materials and packages are the principle aims of the packaging research.

The studies will cover such problems as: the permeability of materials and of packages to moisture vapor, to liquids (water, oil, fats, etc.) and to gases (air, oxygen, nitrogen, carbon dioxide). Protection against breakage and mechanical damage is deliberately omitted, temporarily, pending settlement of a proposal to establish a testing station.

Another part of the program will deal with the minimizing of insect and mold attacks on packages. Details are to be secured of the requirements of home and export markets in this matter and the literature on the problem is to be reviewed. Collections will be maintained of insects, mites and mold cultures such as attack packages. Packages and materials treated with insecticides and inhibitors, and untreated, will be exposed to attack. From the results of these experiments recommendations will be made for the best packaging technique to minimize such attacks.

Finances of the Research Assn. are derived in part from subscriptions of member firms and in part from an annual grant of the British Government's Department of Scientific and Industrial Research.

As well as the fundamental scientific research work for its Printing and Packaging Divisions, PATRA undertakes a great deal of individual "trouble shooting" for its members.

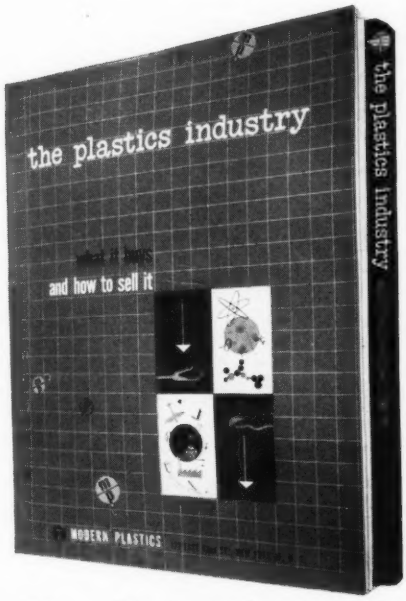
During the year the association has carried out 680 special investigations for individual members through its information and liaison service; has loaned 2,213 technical publications to printing and packaging members from its technical library and has published each month *Printing Abstracts* and *Packaging Abstracts*.

Special publications which PATRA has provided for its members have included descriptions of two new processes evolved by the research association: "The Production of Electrotypes from Wax Molds Without the Use of Graphite" and "The 'Patramold' Electrotype Process."

With a floor area of some 25,000 sq. ft. PATRA's research center will contain the extensive technical library and the following laboratories: technological, constant humidity, permeability, paper, rheology, optics, electro-chemistry, surface chemistry; two on general research; analytical, photographic, microscopy and mycological; a special investigations laboratory and two variable temperature and humidity laboratories where every kind of climatic condition will be reproducible.

how to figure your sales potential in the plastics market

free market analysis of the plastics industry



40-page data file packed with up-to-date facts and figures. Lists 101 kinds of capital equipment, supplies and short-life equipment used by the industry.

This new 40-page data file contains up-to-date facts, figures, charts, graphs, and maps—lists actual plant inventories on 101 different kinds of capital equipment, 40 principal items of supplies and short-life equipment—raw material production through the last ten years—geographical location of industry—tips on selling and advertising. You'll find it helpful in figuring your sales potential and in planning sales, distribution and advertising.
The plastics industry may represent a good market for your product. This data file will help you evaluate the plastics industry as a potential market and help you plan sales distribution and advertising.

FREE: **Write or clip coupon on your company letterhead and mail to us.**

MODERN PLASTICS
MAGAZINE
122-PE EAST 42nd STREET, NEW YORK 17, NEW YORK

MODERN PLASTICS MAGAZINE
122-PE East 42nd Street, New York 17, New York

Gentlemen:
Please rush my copy of your new 40-page data folder entitled, "The Plastics Industry—What it Buys and How to Sell it."

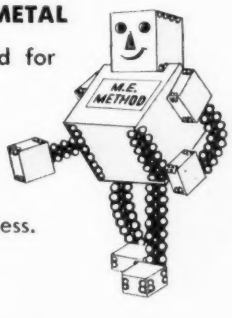
We are particularly interested in advertising .....
..... (product or service).

Name .....
Position .....
Firm .....
City ..... Zone .... State .....

Impact

METAL EDGE
gives it!

METAL EDGE boxes pack a powerful sales wallop! Attractive, eye-catching—they add punch to your advertising and merchandising program. **METAL EDGE's** distinctive metal-stayed corners, rugged Superfibre board, and bright Celolustre finish, all help add a quality "feel" . . . promote sales. The **METAL EDGE Method,** used for years by prominent concerns in 77 industries, is engineered to fit the individual business.



NATIONAL METAL EDGE BOX COMPANY

332 NORTH 12TH STREET
PHILADELPHIA 7, PA.

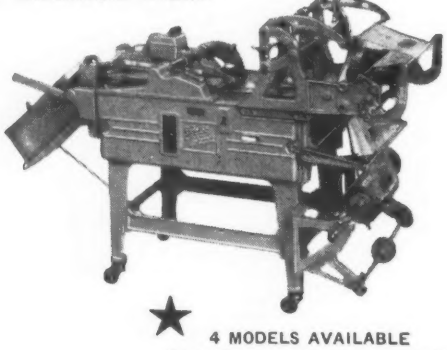
PROMINENT FOOD MERCHANDISERS
USE SIMPLEX BAG MACHINES

For

Frozen Foods
Bakery Products
Potato Chips
Confections
Marshmallows
Paste Products
Peanuts
Popcorn
Candies
Soup Mixes
and other products

IF you package your products in bags made of cellophane or any of the thermoplastic coated materials, or laminated sheets, do as hundreds of the world's leading merchandisers do—make your own bags with a SIMPLEX machine. Buy the plain or printed material in rolls, make the bags in your own plant where you can exercise complete control over timing, quality, inventory and size.

You not only control the manufacturing operation, but you do it all at a saving in the cost of your bags. SIMPLEX bag making machines are simple to operate, adjust and maintain. The SIMPLEX is a high speed automatic machine which will produce up to 5000 heat-sealed, flat or gusset square bottom bags per hour, in sizes up to 12" in width and 20" in length, using rolls of 30" maximum width.



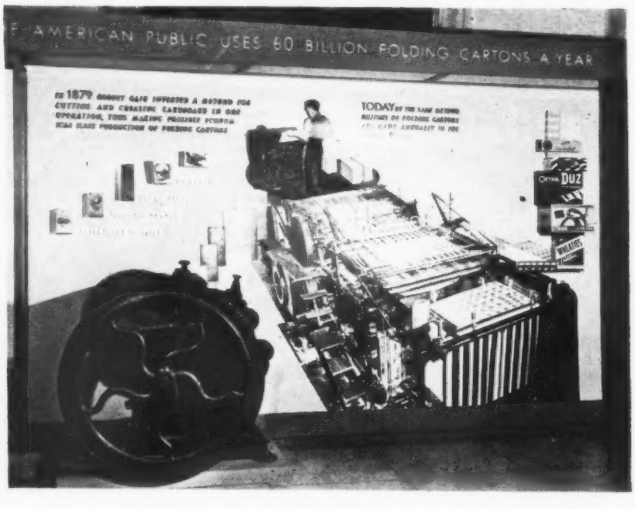
4 MODELS AVAILABLE

Model 1 makes bags in sizes up to 9" wide by 16" long. Model 4 makes the larger sizes up to 12" wide by 20" long. Model 7 makes flat foil bags up to 10" wide by 7" long, while Model 10 makes the larger bags of foil or laminations employing foil.

Simplex
WRAPPING MACHINE COMPANY
534 23RD AVENUE · OAKLAND 6 · CALIFORNIA

Historic press on exhibit

In 1879 Robert Gair, founder of Robert Gair Co., Inc., New York, first cut and creased folding boxes in



one operation on this historic press, now on exhibit at The Franklin Institute in Philadelphia.

Backing up the press is an educational display illustrating early and modern cartons which points up the present magnitude of the folding box industry in this country—approximately 60 billion cartons annually.

Shipping and storage test

Certain differences of opinion among technical personnel regarding the adequacy of nailed-wood, cleated-plywood and wirebound shipping container specifications, resulted in a joint decision of the Army Packaging Board and the Navy Packaging Board to undertake a test shipment of containers to an overseas point.

A joint task committee recommended that such a test shipment be made to Eighth Army Headquarters in Tokyo, and returned with delayed routing at Subic Bay and the Phillipines for a period of outdoor tropical storage to duplicate wartime conditions.

The three categories of wood boxes under study are covered by three separate Joint Army-Navy Specifications and each is broken down into several different types and styles.

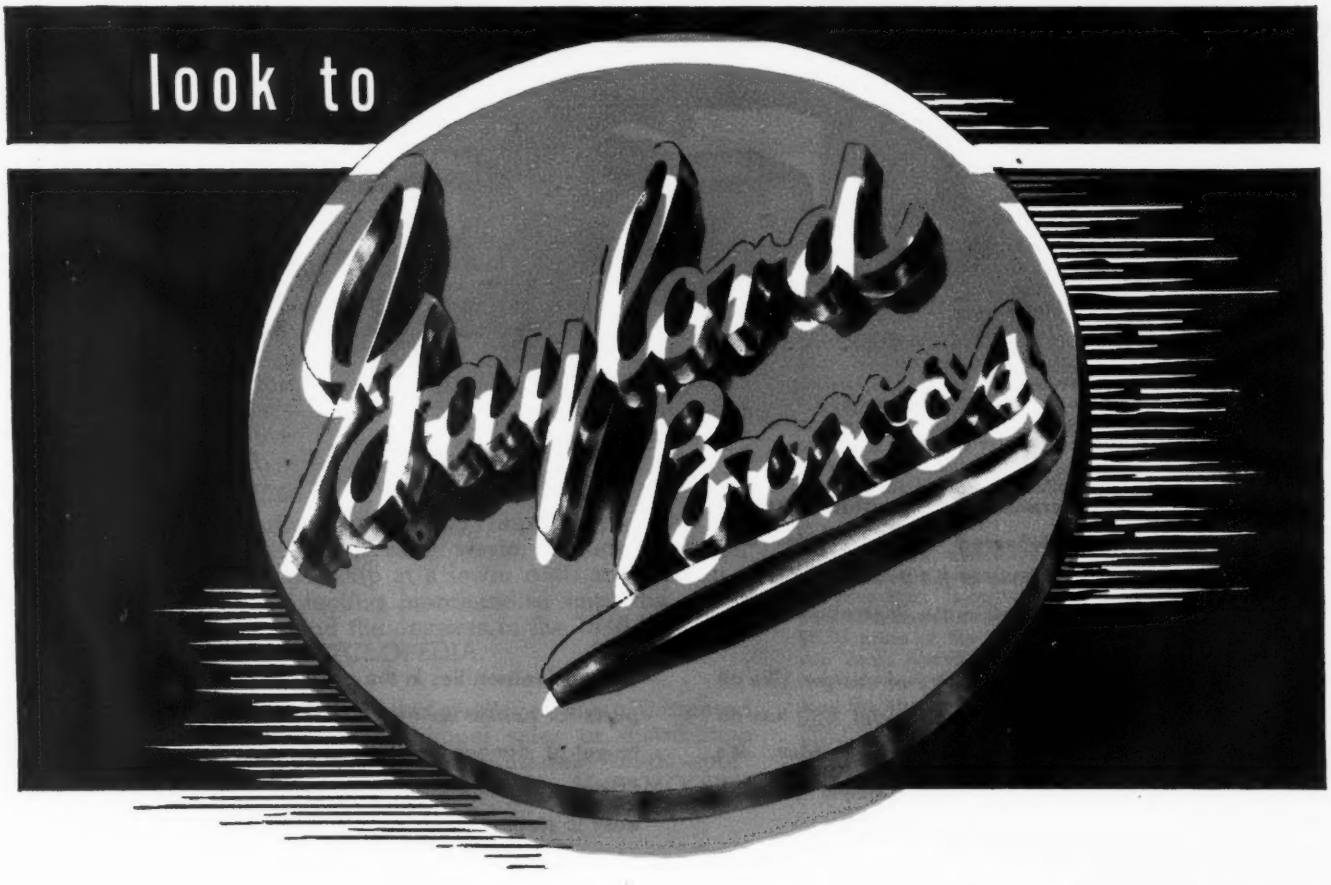
The committee determined that approximately 100 container loadings would be required to cover all box types, styles, weight classes and load types. To provide sufficient containers to arrive at a proper evaluation, it was agreed that seven identical boxes should be shipped for each loading. To provide for a comparison of containers packed by depot personnel and carefully engineered packs, it was agreed that two complete sets of containers should be shipped.

At a joint meeting of the Army Packaging Board and the Navy Packaging Board the returned containers were examined. A joint task committee will supervise a comprehensive examination, after which interested representatives from industry will be permitted an opportunity to examine the containers.

If YOUR PRODUCT is shipped

by train, truck, ship or plane...

look to



For Better Protection

Corrugated and Solid Fibre Boxes

Folding Cartons

Kraft Grocery Bags and Sacks

Kraft Paper and Specialties

In these days of ever-increasing display merchandising, it's more important than ever that your products reach the dealer and consumer as attractive as when they leave your plant.

Your nearest Gaylord Sales Office will show you how Gaylord Boxes can reduce damage claims and help to protect your good will. Call them.

GAYLORD CONTAINER CORPORATION, General Offices: SAINT LOUIS

San Francisco • Oakland • Los Angeles • Portland • Seattle • New York • Chicago • Atlanta • New Orleans
Jersey City • Indianapolis • Houston • Minneapolis • Detroit • Jacksonville • Columbus • Fort Worth • Tampa
Cincinnati • Dallas • Des Moines • Oklahoma City • Greenville • St. Louis • San Antonio • Memphis • Kansas City
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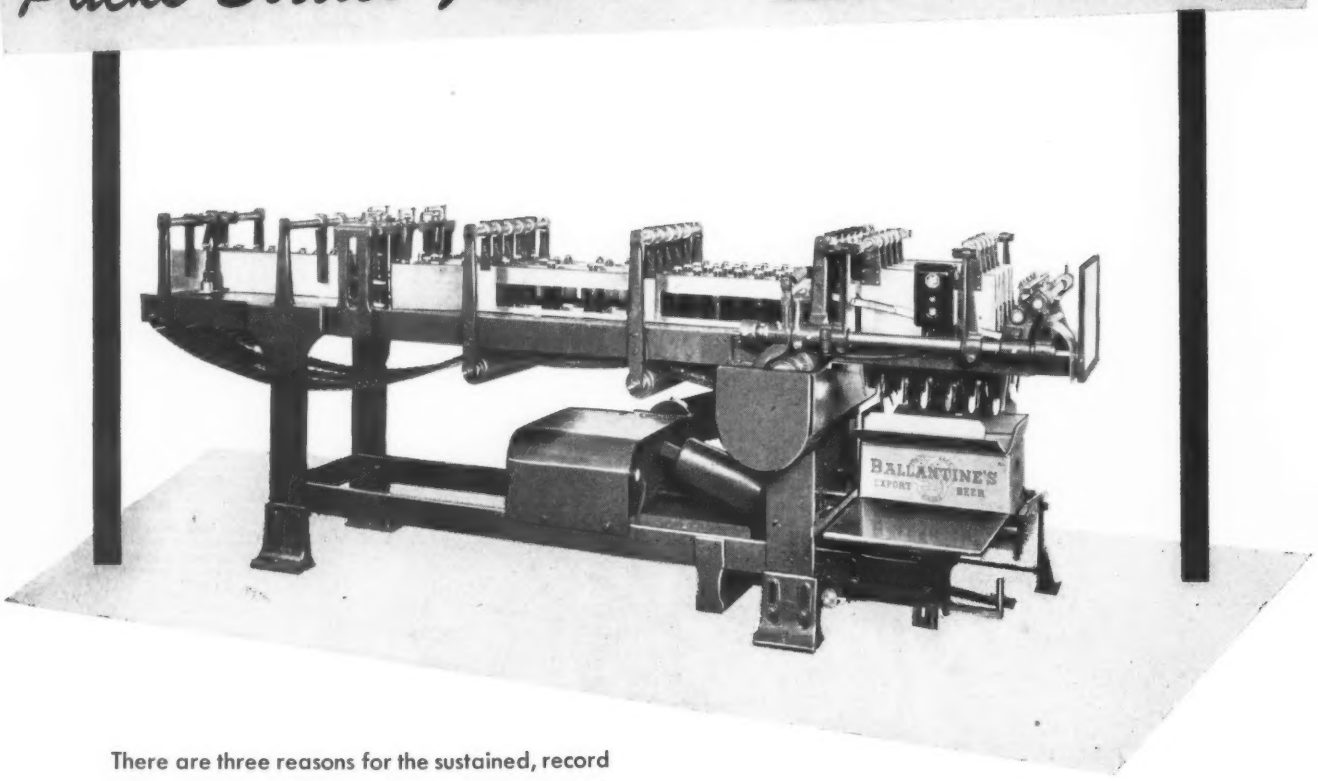
Packs Bottles Faster with Less Maintenance



There are three reasons for the sustained, record high speeds delivered by the Model 830 Bottle Packer. None of the three are secret... you can spot them all in the illustration.

First, note the utter *simplicity of design.* Like all Standard-Knapp machines, Model 830 has no complicated insides to get out of order. It's designed to do a basically simple job the easiest, fastest way.

Secondly, mark its massive, *rugged construction.* It's solidly built. It has the strength to operate at maximum speed without rest, without repair, without developing internal stresses or structural weaknesses. Over the long haul, year after year, this machine packs *faster* because it packs with *less* time out for hospitalization.

The third reason lies in the *easy accessibility* of parts for routine upkeep. There are no hard-to-get-at danger points, no hidden lubrication fittings. Upkeep crews find it easy to lubricate, easy to clean. Consequently, there's no danger of stoppages due to neglected maintenance routines and there's greater assurance of peak performance *all the time.*

If you're about to add to your existing bottle packing equipment, or if you're seeking to replace slow, unsatisfactory machines, write for detailed information on the Model 830.

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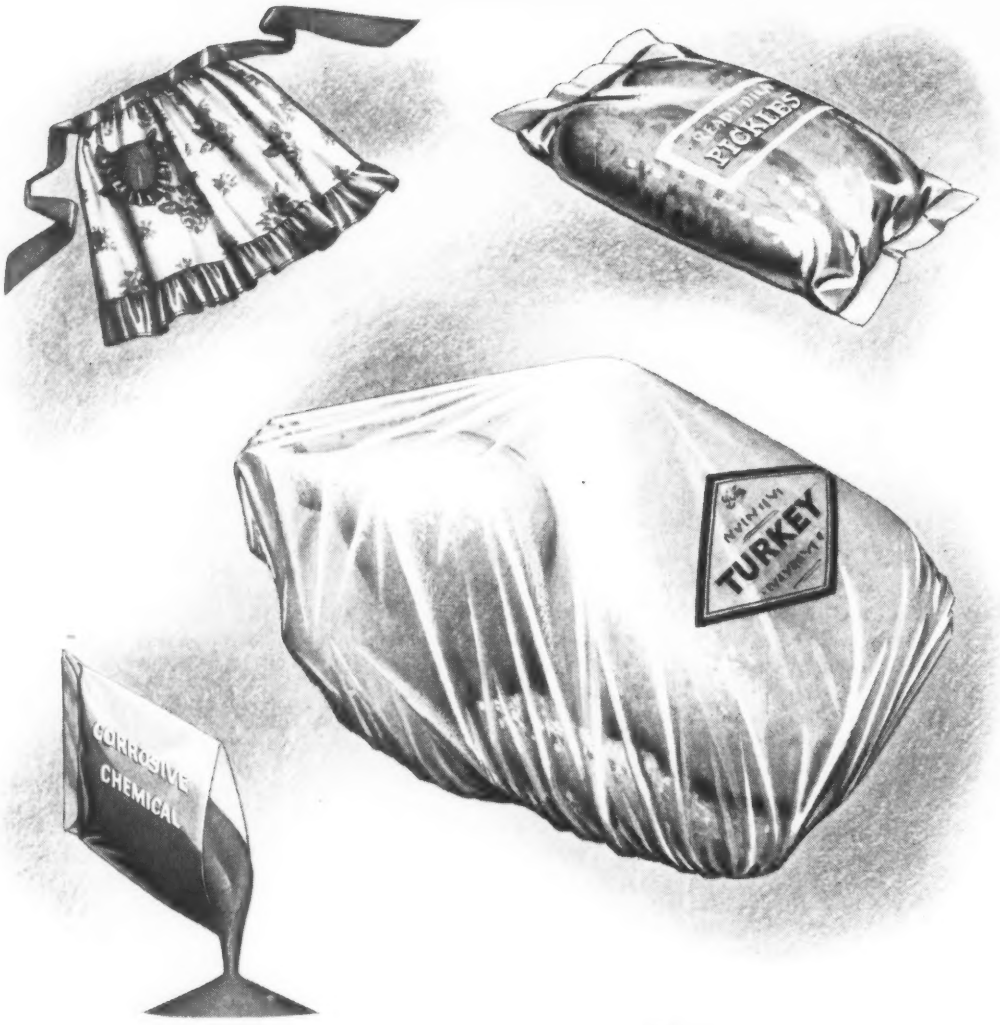

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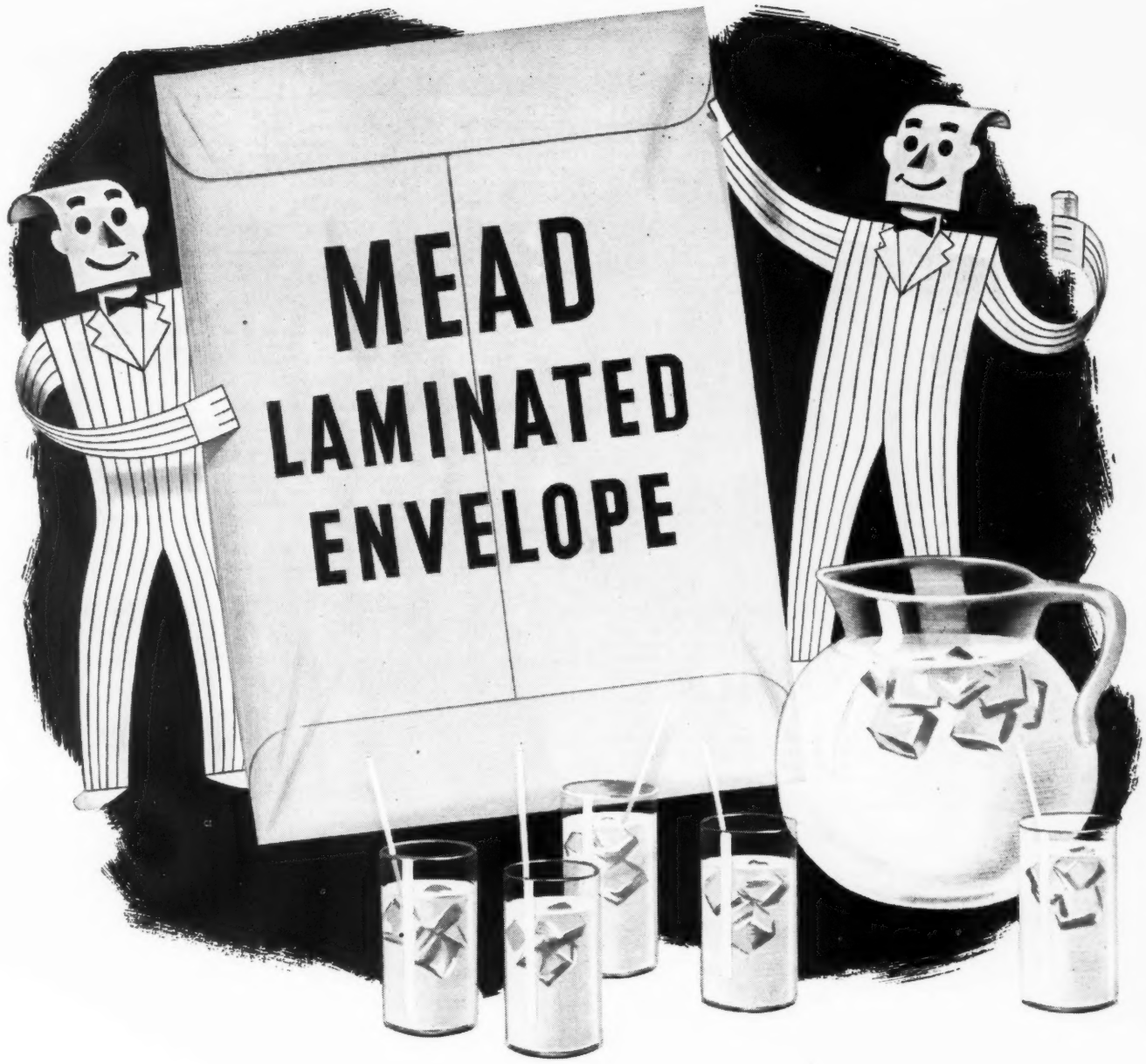

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FOR SALE Rotogravure Machine, one color (spare unit available) 26", roll feed, complete with unwind, rewind and drying equipment. Box 692, Modern Packaging.

INDUSTRIAL ENGINEER, thorough experience metal- and paper containers, desires change. Age 40. College. Located California. Experience: plant layout, line design, methods and standards, maintenance and plant operation. Will also consider factory executive position. Box 693, Modern Packaging.

PACKAGE DESIGNER—Desires position as art director and designer. Thirteen years experience in design and finish for major carton and bag companies. Reply Box 630, Modern Packaging.

FOR SALE—1 Stokes and Smith Universal Auger Filler; 1 Packomatic Auger Filler; 1 Stokes and Smith Sealer, complete with 15 feet track, glue pot and heat sealer. Price $2,297.65 F.O.B. Chicago, or best offer. Rogers and Company, 1556 South Dearborn St., Chicago, Ill.

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FOR SALE: One new Anderson Cellophane Bag Machine. Production speed of 10,000 bags per hour. Offering immediate delivery. Globe Manufacturing Co., 2009 Kinsey St., Philadelphia, Pa.

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FOR SALE—Used Cederhurst Tovell inverting Bottle Blowing Machine without gear reduction drive or motor. Price $750.00. One used Kiefer 16 valve rotary vacuum filling machine and one used Kiefer 18 valve rotary filling machine, both with vacuum supply unit and motor. $1,000.00 ea. This equipment needs some repair. Prices are F.O.B. Baltimore. Calvert Distilling Co., Box 208, Baltimore 3, Maryland.

AVAILABLE PRODUCTION supervisor thorough experience packaging powders filling liquids with modern machinery including Stokes and Smith neverstop. Efficient in planning, scheduling, quality control, cost reduction through time and motion studies, incentives, excellent references. Box 698, Modern Packaging.

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ENGINEER. PRACTICAL man with extensive background in designing and building high-speed automatic converting and packaging machinery. Experience in development of machinery for special purposes. Capable complete charge engineering department and shop. Box 700, Modern Packaging.

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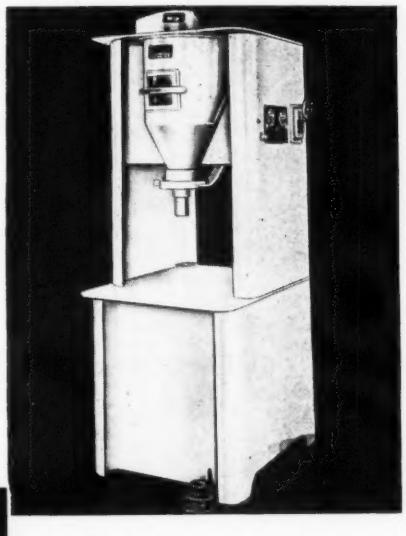

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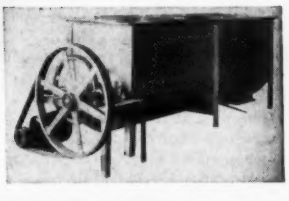

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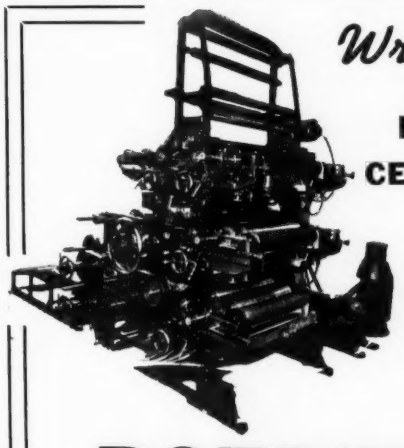

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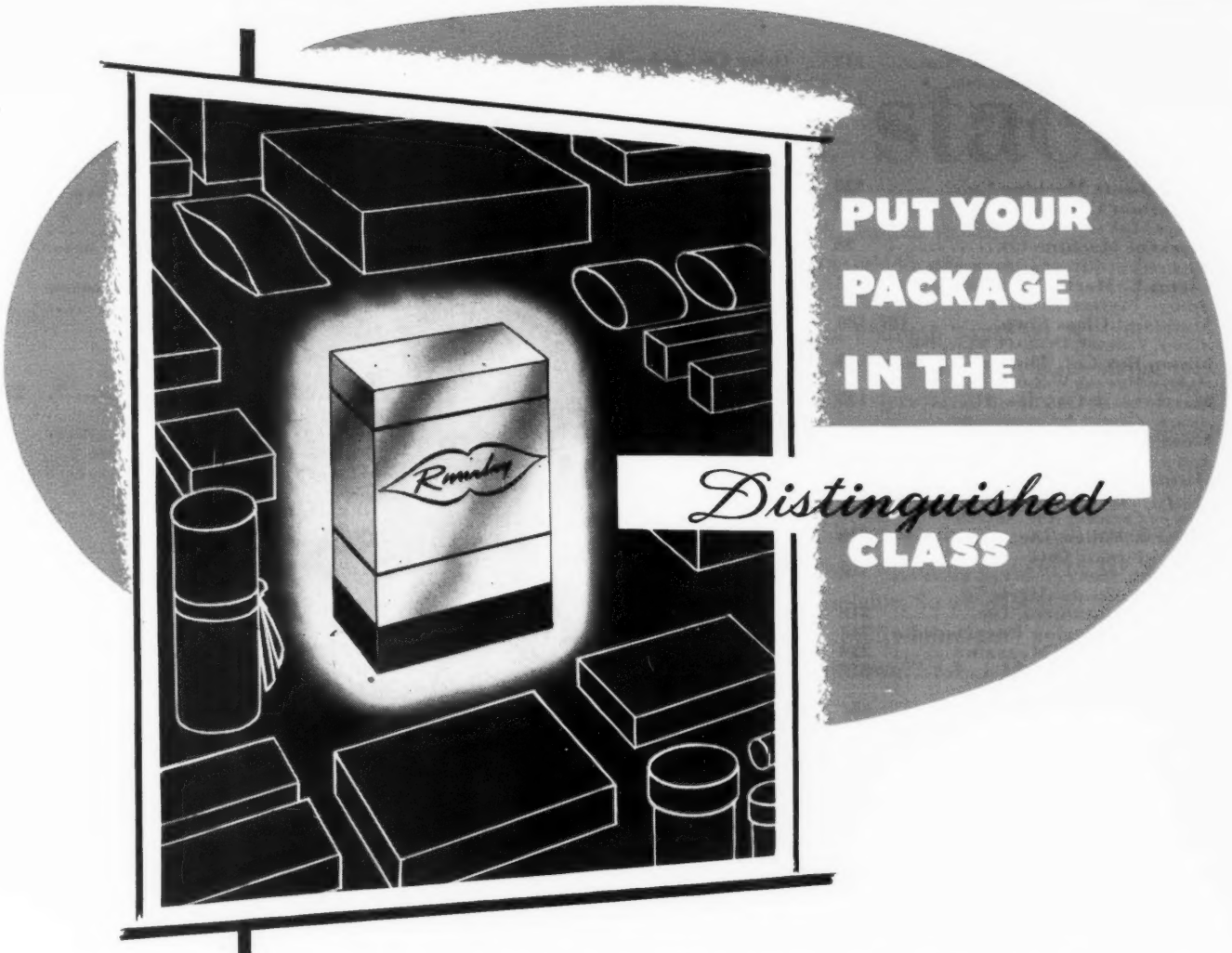

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Modern packaging

A BRESKIN PUBLICATION

Published by Modern Packaging Corp.
122 East 42nd Street, New York 17, N. Y.

Do you stack?

Recently, a Mr. S. wanted to see us. "I have a swell invention which will make a lot of money for you," he said.

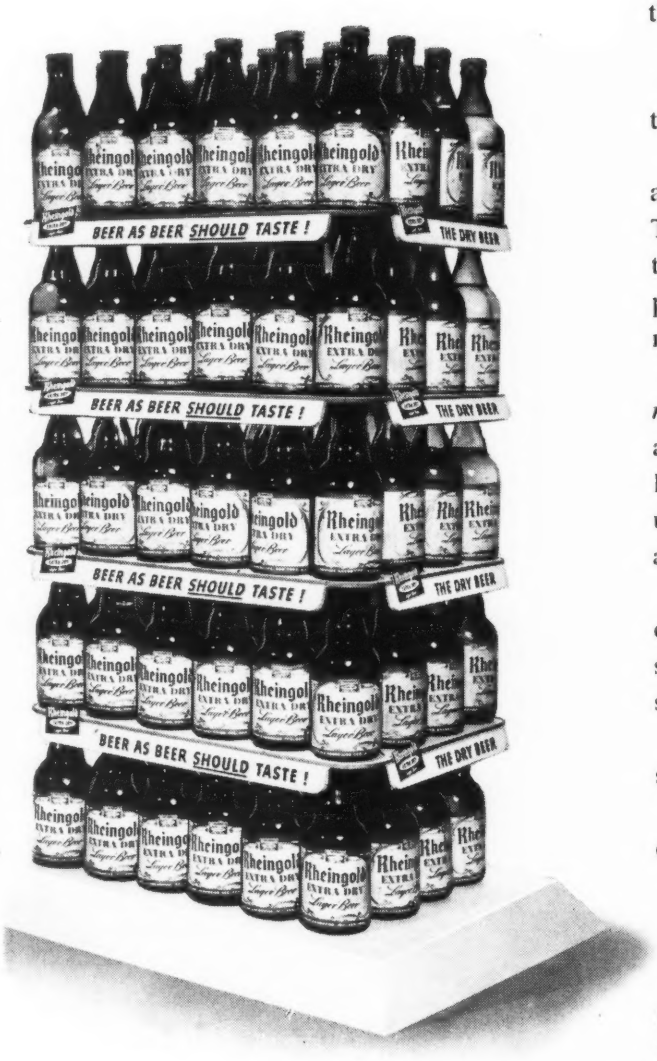
"That's fine," we said.

"I got a grocery in Flatbush." said Mr. S., "on a very busy street. Trucks, trucks, trucks—they go by all the time. The street shakes, The store shakes. From shaking, the stacks of bottled beer fall down. To prevent such, I invent this invention."

We thought the invention was pretty wonderful . . . filled a long-felt want of big companies and small storekeepers all over the country who would be grateful to Mr. S! And to us if we made it available, So we offered to manufacture it, and pay Mr. S. a royalty on sales.

"Hm'm. No cash down?" asked Mr. S. We gave him an advance check.

"How about a full-time job, idea man?" We told him the place was lou—full of idea men, full time.


BEER AS BEER SHOULD TASTE !
THE DRY BEER
BEER AS BEER SHOULD TASTE !
THE DRY BEER
BEER AS BEER SHOULD TASTE !
THE DRY BEER
BEER AS BEER SHOULD TASTE !
THE DRY BEER

"OKAY" said Mr. S. thoughtfully. "But someday I got to invent a way of getting out of that grocery."

The invention is so simple, and so practical that only a man with falling beer bottle problems could think of it! Three layers of board; the top layer punched to fit the base of the bottle; bottom layer punched to fit the top of the bottle; the middle layer not punched at all.

With the Flatbush Stacker (*we invented the name*) every stack of beer bottles becomes a virtual Gibraltar, comparatively speaking! Bottles, beer and proprietors remain unperturbed through normal truck, train, and traffic tremors, or even upstairs over a bowling alley!

The stacker is custom-made to fit bottles, jars and cans of all sizes—will help good products get better positions in supermarkets, and stay in position, will please proprietors, store managers, salespeople and customers.

Brand names and slogans, on the edges, make every stack an advertising display as well as a product display.

Terms very reasonable—and the Flatbush Stacker is exclusive with Einson-Freeman!

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